DEPARTMENT OF COMMERCE
UNITED STATES PATENT OFFICE

CORRECTIONS

to the

MANUAL OF
CLASSIFICATION OF PATENTS

CONTAINING ALL CORRECTIONS DURING THE PERIOD FROM
DATE OF PUBLICATION OF MANUAL (January 1, 1940)
THROUGH ORDER NO. 3964 (July 5, 1945)

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1945

CLASSES ARRANGED BY EXAMINING DIVISIONS

DIVISION 1

4. Baths, Closets, Sinks, and Spittoons
268. Closure Operators
256. Fences
99. Foods and Beverages, subclasses 234–450. (See Division 63 for other subclasses.)
39. Gates
55. Harrows and Diggers
47. Plant Husbandry
111. Planting
97. Plows
275. Scattering Unloaders
182. Sewerage

DIVISION 2

119. Animal Husbandry
6. Bee Culture
17. Butchering
31. Dairy
43. Fishing, Trapping, and Vermin Destroying
100. Presses
68. Textiles, Fluid Treating Apparatus, subclasses 241–277. (See Division 27 for other subclasses.)
131. Tobacco

DIVISION 3

252. Compositions, subclasses 2–8.05, 62, 67–79, 181.1–301.6, 372–408. (See Division 64 for other subclasses.)
22. Metal Founding
148. Metal Treatment
75. Metallurgy

DIVISION 4

193. Conveyors—Chutes, Skids, Guides, and Ways
302. Conveyors—Fluid Current
198. Conveyors—Power Driven
187. Elevators
37. Excavating
227. Fire Escapes
294. Handling—Hand and Hoistline Implements
228. Ladders
214. Material or Article Handling
262. Mining, Quarrying, and Ice Harvesting
243. Pneumatic Dispatch
304. Scaffolds
186. Store Service
212. Traversing Hoists

DIVISION 5

181. Acoustics
24. Buckles, Buttons, Clasps, Etc.
49. Glass
56. Harvesters
84. Music
274. Sound Recording and Reproducing
289. Tying Cords or Strands

DIVISION 6

260. Chemistry, Carbon Compounds, subclasses 1, 124–139, 349–397.7, 429–664, 684–708. The distribution of class 260 among the Examining Divisions is as follows:

Subclass	*Division*
1	6
2–96	50
97–123	15
124–139	6
140–208	43
209–235	15
236–297.5	59
298–326	15
327–348.6	63
349–397.7	6

DIVISION 6—Continued

Subclass	*Division*
398–428.5	63
429–664	6
665–683.6	31
684–708	6
709–773	38
774–813	15
814–822	38

DIVISION 7

88. Optics
95. Photography

DIVISION 8

5. Beds
155. Chairs and Seats
45. Furniture
65. Kitchen and Table Articles
312. Supports, Cabinet Structures
211. Supports, Racks

DIVISION 9

230. Gas Pumps and Fans
253. Motors—Fluid
170. Motors—Fluid Current
103. Pumps

DIVISION 10

Abolished Apr. 10, 1942
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DIVISION 11

12. Boot and Shoe Making
36. Boots, Shoes, and Leggings
218. Button, Eyelet, and Rivet Setting
54. Harness
69. Leather Manufactures
1. Nailing and Stapling
231. Whips and Whip Apparatus

DIVISION 12

192. Clutches and Power-Stop Control
123. Internal-Combustion Engines, subclasses 179 and 185. (For the distribution of class 123 among the Examining Divisions, see Division 28.)
74. Machine Elements and Mechanisms. (See Division 45 for subclasses 216.5–258.)

DIVISION 13

90. Gear Cutting, Milling, and Planing
205. Metal Drawing
78. Metal Forging and Welding

DIVISION 13—Continued

80. Metal Rolling
29. Metal Working. (See Division 14 for subclasses 148–189, and Division 29 for subclasses 200–290.)
163. Needle and Pin Making
207. Plastic Metal Working
82. Turning

DIVISION 14

168. Farriery
153. Metal Bending
29. Metal Working, subclasses 148–189. (See Divisions 13 and 29 for other subclasses.)
113. Sheet-Metal Ware-Making
245. Wire Fabrics and Structure
140. Wireworking

DIVISION 15

260. Chemistry, Carbon Compounds, subclasses 97–123, 209–235, 298–326, 774–813. (For the distribution of class 260 among the Examining Divisions, see Division 6.)

18. Plastics

DIVISION 16

178. Telegraphy. (See Division 65 for subclass 44.)
179. Telephony. (See Division 51 for subclass 171.5 and Division 65 for subclasses 170 and 171.)

DIVISION 17

93. Paper Manufactures
101. Printing
270. Sheet-Material Associating or Folding
271. Sheet or Web Feeding or Delivering
199. Type Casting
276. Type Setting

DIVISION 18

123. Internal-Combustion Engines, subclasses 7 to 17. (For the distribution of class 123 among the Examining Divisions, see Division 28.)
121. Motors-Expansible-Chamber Type
60. Power Plants
264. Speed-Responsive Devices

DIVISION 19

110. Furnaces
158. Liquid and Gaseous Fuel Burners
126. Stoves and Furnaces

DIVISION 20

107. Bread, Pastry, and Confection Making
292. Closure Fasteners
154. Laminated Fabric and Analogous Manufactures, subclasses 1, 2.21–2.28, 2.5, 3–32, 33.05, 33.1, 35–39, 41–43, 44–45.9. (See Division 55 for other subclasses.)
70. Locks
16. Miscellaneous Hardware
109. Safes, Bank Protection, and Related Devices
27. Undertaking

DIVISION 21

28. Textiles
87. Textiles, Braiding, Netting, and Lace Making
26. Textiles, Cloth Finishing
19. Textiles, Fiber Preparation
66. Textiles, Knitting

DIVISION 21—Continued

57. Textiles, Spinning, Twisting, and Twining
139. Textiles, Weaving

DIVISION 22

244. Aeronautics
42. Firearms
89. Ordnance

DIVISION 23

235. Registers. (See Division 41 for subclasses 1, 29–57, part 61, 61.5, 64–72, 74, 76–78, 79.5, 83–91, 92 (except electric multiplying machines which are in this division), 93–129, and 131–144.)

DIVISION 24

2. Apparel
223. Apparel Apparatus
112. Sewing Machines

DIVISION 25

233. Centrifugal-Bowl Separators
209. Classifying, Separating, and Assorting Solids

DIVISION 25—Continued

202. Distillation
83. Mills
241. Solid Material Comminution or Disintegration
130. Threshing
146. Vegetable and Meat Cutters and Comminutors

DIVISION 26

171. Electricity—Generation. (See Division 42 for subclasses 34, 95, 264–268, 270–273, 308, 309.)
172. Electricity—Motive Power. (See Division 42 for subclass 245.)

DIVISION 27

300. Brush, Broom, and Mop Making
15. Brushing, Scrubbing, and General Cleaning
134. Cleaning and Liquid Contact With Solids
68. Textiles, Fluid Treating Apparatus. (See Division 2 for subclasses 241–277.)
38. Textiles, Ironing or Smoothing

DIVISION 28

263. Heating
123. Internal-Combustion Engines. The distribution of class 123 among the Examining Divisions is as follows:

Subclass	*Division*
7–17	18
143–169	48
179, 185	12
196	45
All others	28

309. Machine Elements, Cylinders and Pistons
266. Metallurgical Apparatus

DIVISION 29

190. Baggage
79. Button Making
150. Cloth, Leather, and Rubber Receptacles
7. Compound Tools
147. Coopering
29. Metal Working, subclasses 200–290. (See Divisions 13 and 14 for other subclasses.)
224. Package and Article Carriers
81. Tools

DIVISION 29—Continued

157. Wheelwright Machines
143. Wood Sawing
142. Wood Turning
144. Woodworking
145. Woodworking Tools

DIVISION 30

102. Ammunition and Explosive Devices
236. Automatic Temperature and Humidity Regulation
257. Heat Exchange, subclasses 2–5. (See Division 32 for other subclasses.)
237. Heating Systems
240. Illumination
67. Illuminating Burners
297. Thermostats and Humidostats

DIVISION 31

260. Chemistry, Carbon Compounds, subclasses 665–683.6 (For the distribution of class 260 among the Examining Divisions, see Division 6.)
196. Mineral Oils

DIVISION 32

259. Agitating
255. Earth Boring
261. Gas and Liquid Contact Apparatus
183. Gas Separation
257. Heat Exchange. (See Division 30 for subclasses 2–5.)
166. Wells

DIVISION 33

14. Bridges
61. Hydraulic and Earth Engineering
72. Masonry and Concrete Structures
189. Metallic Building Structures
25. Plastic Block and Earthenware Apparatus
94. Roads and Pavements
108. Roofs
20. Wooden Buildings

DIVISION 34

191. Electricity—Transmission to Vehicles
213. Railway Draft Appliances
105. Railway Rolling Stock
246. Railway Switches and Signals
104. Railways

DIVISION 34—Continued

238. Railways, Surface Track
116. Signals and Indicators
291. Track Sanders

DIVISION 35

86. Ammunition and Explosive-Charge Making
40. Card, Picture, and Sign Exhibiting
222. Dispensing
225. Dispensing Beverages
226. Filling and Closing Portable Receptacles

DIVISION 36

249. Automatic Weighers
265. Force Measuring
73. Measuring and Testing

DIVISION 37

200. Electricity—Circuit Makers and Breakers

DIVISION 38

260. Chemistry, Carbon Compounds, subclasses 709–773, 814–822 (For the distribution of class 260 among the Examining Divisions, see Division 6.)

DIVISION 38—Continued

117. Coating; Processes and Miscellaneous Products
106. Compositions, Coating or Plastic. (See Division 64 for subclasses 3–32, 123–285, 287–311.)

DIVISION 39

50. Fluid-Pressure Regulators
277. Multiple Valves
251. Valves
137. Water Distribution

DIVISION 40

220. Metallic Receptacles
229. Paper Receptacles
206. Special Receptacles and Packages
217. Wooden Receptacles

DIVISION 41

194. Check-Controlled Apparatus
133. Coin Handling
232. Deposit and Collection Receptacles
234. Recorders
235. Registers, subclasses 1, 29–57, part 61, 61.5, 64–72, 74, 76–78, 79.5, 83–91, 92 (except electric multiplying machines which are in Division 23), 93–129, and 131–144 (See Division 23 for other subclasses.)

DIVISION 41—Continued

197. Typewriting Machines

DIVISION 42

171. Electricity — Generation, subclasses 34, 95, 264–268, 270–273, 308, 309 (See Division 26 for other subclasses.)
172. Electricity—Motive Power, subclass 245 (See Division 26 for other subclasses.)
177. Electric Signaling

DIVISION 43

8. Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers
260. Chemistry, Carbon Compounds, subclasses 140–208 (For the distribution of class 260 among the Examining Divisions, see Division 6.)
52. Explosive, Pyrotechnic and Match Compositions

DIVISION 43—Continued

167. Medicines, Poisons, and Cosmetics (See Division 63 for subclasses 13–49.)
127. Sugar, Starch, and Carbohydrates

DIVISION 44

21. Preserving, Disinfecting, and Sterilizing
62. Refrigeration

DIVISION 45

123. Internal-Combustion Engines, subclass 196 (For the distribution of class 123 among the Examining Divisions, see Division 28.)
278. Land Vehicles—Animal Draft Appliances
298. Land Vehicles, Dumping
305. Land Vehicles—Wheel substitutes
301. Land Vehicles—Wheels and Axles
184. Lubrication
74. Machine Elements and Mechanisms, subclasses 216.5–258 (See Division 12 for other subclasses.)

DIVISION 45—Continued

308. Machine Elements—Bearings and Guides
64. Machine Elements, Shafting and Flexible Shaft Couplings
185. Motors
295. Railway Wheels and Axles
152. Resilient Tires and Wheels
267. Spring Devices
293. Vehicle Fenders

DIVISION 46

91. Coating
159. Concentrating Evaporators
169. Fire Extinguishers
299. Fluid Sprinkling, Spraying, and Diffusing
122. Liquid Heaters and Vaporizers

DIVISION 47

77. Boring and Drilling
188. Brakes
303. Fluid-Pressure Brake and Analogous Systems
280. Land Vehicles
296. Land Vehicles, Bodies and Tops
180. Motor Vehicles

DIVISION 48

175. Electricity—General Applications
123. Internal-Combustion Engines, subclasses 143–169 (For the distribution of class 123 among the Examining Divisions, see Division 28.)

DIVISION 49

34. Drying and Gas or Vapor Contact With Solids
210. Liquid Separation or Purification
98. Ventilation

DIVISION 50

260. Chemistry, Carbon Compounds, subclasses 2–96 (For the distribution of class 260 among the Examining Divisions, see Division 6.)

DIVISION 51

250. Radiant Energy (See Division 54 for subclasses 27.5, 41.5, 42–108, 141–177.)

DIVISION 51—Continued

179. Telephony, subclass 171.5 (See Divisions 16 and 65 for other subclasses.)

DIVISION 52

279. Chucks or Sockets
288. Joint Packings
41. Ornamentation
286. Packed Shaft or Rod Joints
285. Pipe Joints or Couplings
138. Pipes and Tubular Conduits
287. Rod Joints or Couplings
248. Supports
306. Tool-Handle Fastenings
284. Valved Pipe Joints or Couplings

DIVISION 53

11. Books, Making
281. Books, Strips, and Leaves
160. Closures, Partitions and Panels, Flexible and Portable
30. Cutlery
35. Education
216. Label Pasting and Paper Hanging
282. Manifolding
129. Paper Files and Binders

DIVISION 53—Continued

283. Printed Matter
120. Stationery
135. Tents, Canopies, Umbrellas, and Canes
132. Toilet

DIVISION 54

316. Electric Lamp and Discharge Devices, Manufacture and Repair
315. Electric Lamp and Discharge Devices, Systems
176. Electric Lamps
250. Radiant Energy, subclasses 27.5, 41.5, 42–108, 141–177. (See Division 51 for other subclasses.)

DIVISION 55

3. Artificial Body Members
32. Dentistry
154. Laminated Fabric and Analogous Manufactures, subclasses 2, 2.6, 2.70–2.81, 33, 34, 40, 43.5, 46–56 (See Division 20 for other subclasses.)
128. Surgery

DIVISION 56

204. Chemistry, Electrical and Wave Energy
92. Paper Making and Fiber Liberation

DIVISION 57

272. Amusement and Exercising Devices
46. Amusement Devices, Toys
10. Bolt, Nail, Nut, Rivet, and Screw Making
59. Chain, Staple, and Horseshoe Making
164. Cutting and Punching Sheets and Bars
85. Driven, Headed, and Screw-Threaded Fastenings
63. Jewelry
151. Nut and Bolt Locks

DIVISION 58

51. Abrading
215. Bottles and Jars
76. Metal Tools and Implements, Making
125. Stone Working

DIVISION 59

23. Chemistry
260. Chemistry, Carbon Compounds, subclasses 236–297.5 (For the distribution of class 260 among the Examining Divisions, see Division 6.)
71. Chemistry, Fertilizers
48. Gas, Heating and Illuminating, subclasses 61–179, 190–215 (See Division 64 for other subclasses.)

DIVISION 60

136. Batteries
13. Electric Furnaces
219. Electric Heating
314. Electric Lamp and Discharge Devices, Consumable Electrodes
320. Electricity, Battery and Condenser Charging and Discharging
290. Prime-Mover Dynamo Plants
201. Resistances and Rheostats

DIVISION 61

9. Boats and Buoys
58. Horology
115. Marine Propulsion
254. Pushing and Pulling Implements
258. Railway Mail Delivery
114. Ships
161. Time Controlling Mechanism
242. Winding and Reeling

DIVISION 62

273. Amusement Devices, Games
33. Geometrical Instruments
124. Mechanical Guns and Projectors
311. Supports, Tables

DIVISION 63

260. Chemistry, Carbon Compounds, subclasses 327–348.6, 398–428.5 (For the distribution of class 260 among the Examining Divisions, see Division 6.)
195. Chemistry, Fermentation

DIVISION 63—Continued

99. Foods and Beverages, subclasses 1–233 (See Division 1 for other subclasses.)
167. Medicines, Poisons, and Cosmetics, subclasses 13–49 (See Division 43 for other subclasses.)

DIVISION 64

252. Compositions, subclasses 1, 8.1–61, 63–66, 80–181, 302–371 (See Division 3 for other subclasses.)
106. Compositions, Coating or Plastic, subclasses 3–32, 123–285, 287–311 (See Division 38 for other subclasses.)
44. Fuel and Igniting Devices
48. Gas, Heating and Illuminating, subclasses 1–60, 180–189, 216, and 217 (See Division 59 for other subclasses.)

DIVISION 65

174. Electricity, Conductors and Insulators
173. Electricity, Connectors
178. Telegraphy, subclass 44 (See Division 16 for all other subclasses.)
179. Telephony, subclasses 170 and 171 (See Divisions 16 and 51 for other subclasses.)

DESIGNS DIVISION

Designs. (See pages 1 through 13, following page 347 (1943).)

8 (1945)

ERRATA AND MINOR CORRECTION SHEET

[July 1–December 31, 1944]

The following changes in the Manual of Classification, published 1940, made between July 1 and December 31, 1944, are noted. These changes should be made upon the appropriate pages of the Manual. A page number followed by the year in brackets, e. g., 29 (1941), indicates that the page has been reprinted since January 1, 1940.

NOTE.—Recently established classes 73 and 241, and certain subclasses established and abolished in classes 7, 8, and 29 are not enumerated here inasmuch as such changes are included in new pages published for insertion in the Manual.)

CANCELLATIONS

The following subclasses have been abolished and should be canceled in the Manual.

In class 9, Boats and Buoys, page 23, subclasses 22 and 23.

In class 29, Metal Working, page 44a (1944), subclass 187.

In class 83, Mills, page 109, subclasses 1, 3, 4, 6–14, 17, 18, 22, 42, 44–46, 52, 53, 57, 61–63, 75, 93, 94.

In class 99, Foods and Beverages, page 125 (1943), subclasses 264, 265, 266 and 267.

In class 112, Sewing Machines, page 142, subclass 5.

In class 133, Coin Handling, page 171 (1941) subclasses 9, 11, 12, 13, 14.

In class 209, Classifying, Separating, and Assorting Solids, page 237, subclass 6.

In class 234, Recorders, page 262, subclasses 17, 18, 19, and 20.

In class 265, Force Measuring, page 302, subclasses 1–4, 10–22, 24–26, 44–46.

ADDITIONS

The following subclasses have been established and should be inserted in the Manual.

In class 9, Boats and Buoys, page 23.

(To be inserted following subclass 16)

30 Life craft handling
31 Conveying from storage position to launching position
32 Automatic control
33 Launching upon sinking of ship
34 Davits
35 Movably mounted
36 Compound movement
37 Rocking
38 Translating and tilting
39 Pivoting about single axis
40 Vertical axis
41 Chutes or tracks
42 Launching protectors
43 Connectors between boat and lowering tackle
44 Releasing mechanism, boat attached
45 Simultaneous, bow and stern
46 Chocks and/or lashings

In class 12, Boot and Shoe Making, page 25:

69.5 Lacing or unlacing machines

In class 15, Brushing, Scrubbing, and General Cleaning, page 27 (1941):

Implements
Pipe and tube cleaners
Outside
104.045 Fluid blast

In class 20, Wooden Buildings, page 33 (1942):

101 Filling hollow walls (To follow subclass 92)

In class 22, Metal Founding:

Page 35 (1940)
Molds
113.5 Centrifugal
Page 36 (1940)
Processes
Casting
200.5 Centrifugal

In class 40, Card, Picture, and Sign Exhibiting, page 57:

Checks, labels, and tags
27.5 Coin or token type

In class 42, Firearms, page 59:
Breech loading
39.5 Movable chamber
In class 78, Metal Forging and Welding, page 105:
0.5 Briquetting (e. g., powder, scrap)
In class 116, Signals and Indicators, page 148:
Indicators
136.5 Pointers or indicator arms
In class 117, Coating; Processes and Miscellaneous Products, page 148b(1942):
Particular base or coating
138.5 Preserving textiles (including mothproofing)
139.5 Textile lubricating, conditioning or handle improving
Cellulose or derivative base
Regenerated cellulose, cellulose ether or ester base
144.5 Luster modifying
In class 140, Wireworking, page 179:
Article making and forming
Hooks
81.5 Garment hanger type
In class 146, Vegetable and Meat Cutters and Comminutors, page 186:
71.5 Grain slicers
In class 154, Laminated Fabric and Analogous Manufactures, page 194 (1943):
Fabrics
53.5 Adhesive tape or base
53.6 Ribbon, strip or strand

In class 206, Special Receptacles and Packages, page 236 (1940):
0.80 For coins (e. g., mats)
0.81 Combined
0.82 With closing or fastening means
0.83 Multiple pocket or compartment
0.84 Multiple pocket or compartment
In class 232, Deposit and Collection Receptacles, page 261:
64 Coin deliverers (e. g., for dumping into collector's hand)
65 Swingable or tiltable delivering element
66 With controlled discharge outlet
In class 235, Registers, page 263:
Calculators
64.3 Decimal point locators
64.7 Photographic
In class 240, Illumination, page 269:
Light supports
52.15 Magnetic
In class 280, Land Vehicles, page 314:
Wheeled
Running gear
Equalized frame
104.5 Tandem axles

CHANGES OF TITLE

In class 13, Electric Furnaces, page 26, the title of subclass 33 should read:
33 Charging or discharging devices
In class 29, Metal Working, page 44 (1944), the title of subclass 4.5 should read:
Special work
4.5 Shredding metal (e. g., metal wool making)
In class 42, Firearms, page 59, the titles of subclasses 15, 27, and 61 should read:
Breech loading
Sliding breechblock
15 Movable chamber
Swinging breechblock
27 Movable chamber
Revolvers
61 Cylinder loaded from muzzle end

In class 65, Kitchen and Table Articles, page 81, the title of subclass 57 should read:
Condiment holders
57 With agitator or outlet clearer
In class 117, Coating; Processes and Miscellaneous Products, page 148b (1942), the title of subclass 136 should read:
Particular base or coating
136 Heat- or fireproofing coating
In class 140, Wireworking, page 179, the title of subclass 81 should read:
Article making or forming
Hooks
81 Garment fastener type

In class 209, Classifying, Separating, and Assorting Solids, page 237, the title of subclass 67 should read:

Adhesion
Coated surface or mass
Mercurial
Receivers
With agitating or conveying
67 With rubbing

Page 239, the title of subclass 191 should read:

Fluid suspension
Liquid
Floating
Gravity liquid
Metallic (amalgamators)
191 With rubbing

In class 229, Paper Receptacles, page 258, the title of subclass 58 should read:

Bags
Bottoms
58 Perpendicular to side walls

In class 234, Recorders, page 262, the title of subclass 62 should read:

62 Thermal application to record receiver

In class 235, Registers, page 263, the title of subclass 132 should read:

132 With control means operable on predetermined register reading

In class 265, Force Measuring, page 302, subclasses 5+ should be indented under subclass 27 with titles as follows.

Scales
5 Recording
6 Beam
7 Automatically slidable poise
8 Spring
9 Automatic

CHANGES IN THE "CLASSES ARRANGED BY EXAMINING DIVISIONS", AT THE FRONT OF THE MANUAL

Page 1 (1942)

In Division 6, in the reference to class 260, Chemistry, Carbon Compounds, in the matter within the parentheses, after "Division 31;" insert *subclasses 709-773, 814-822, for which see Division 38;*

In the enumeration of subclasses in Division 50, cancel "709-773, 814-822."

Page 2 (1942)

In Division 13, in the reference to class 29, Metal Working, "84-89" should read *200-290.*

In Division 15, in the reference to class 260, Chemistry, Carbon Compounds, *38* should be inserted after "31", in the enumerations of other divisions having this class.

In Division 16, in the matter within parentheses following "179 Telephony", "subclasses" first occurrence should be changed to *subclass* and "2.5, 15, and" should be canceled.

Page 3 (1942)

In Division 25, add *241, Solid Material Comminution or Disintegration.*

In Division 26, in the references to class 171, Electricity, Generation, and class 172, Electricity, Motive Power, in the matter within the parentheses, "Division 34" should read *Division 42* in both instances.

In Division 29, in the reference to class 29, Metal Working, "84-89" should read *200-290.*

In Division 31, in the reference to class 260, Chemistry, Carbon Compounds, *38* should be inserted after "15,", in the enumerations of other divisions having this class.

Page 4 (1942)

In Division 34, the references to class 171, Electricity, Generation, and class 172, Electricity, Motive Power, should be canceled.

In Division 38, add: 260, Chemistry, Carbon Compounds, subclasses 709-773, 814-822; (for other subclasses see Divisions 6, 15, 31, 43, 50, 59, and 63).

In Division 42, add: 171, Electricity, Generation, subclasses 34, 95, 264-268, 270-273, 308, 309; (see Division 26 for other subclasses).

172, Electricity, Motive Power, subclass 245; (see Division 26 for other subclasses).

In Division 43, in the reference to class 260, Chemistry, Carbon Compounds, *38* should be inserted after "31,", in the enumerations of other divisions having this class.

Page 5 (1942)

In Division 50, class 260, Chemistry, Carbon Compounds, change the enumeration of subclasses to read: *2-96,* and in the matter within the parentheses, insert *38* after "31,".

In Division 51, in the reference to class 179, Telephony, "subclasses 2.5, 15, and 171.5" should be changed to *subclass 171.5.*

Page 6 (1942)

In Division 59, in the reference to class 260, Chemistry, Carbon Compounds, *38* should be inserted after "31,", in the enumeration of other divisions having this class.

Page 7 (1944)

In Division 63, in the reference to class 260, Chemistry, Carbon Compounds, *33* should be inserted after "31,", in the enumeration of other divisions having this class.

CHANGES IN THE "CLASSES ARRANGED ALPHABETICALLY" AT THE FRONT OF THE MANUAL

Page 11 (1942), immediately below "116, Signals and indicators ---- 34" insert: *241, Solid material comminution or disintegration ---- 25.*

CHANGES IN THE "CLASSES NUMERICALLY ARRANGED" AT THE BACK OF THE MANUAL

Add: *241, Solid material comminution or disintegration* ---- 25.

ERRATA

On page 42, the 4th column pertaining to class 28, Textiles, should be canceled.

In class 29, page 44a (1944), subclass 157.4, change "heaters" to *headers;* subclass 226 should be coordinate with 227.

On page 94 (1942) the three columns pertaining to old class 73, Measuring and Testing, should be canceled.

In class 83, Mills, page 109, the unnumbered subclass titles "Chop graders" and "Ore and coal" which precede subclasses 42 and 52, respectively, should be canceled.

In class 98, Ventilation, page 123, the title of subclass 72, "Rotary wind motor" should be coordinate with the title of subclass 68. The unnumbered subclass title "Rotary air pump" immediately below subclass 1 should be canceled.

In class 189, Metallic Building Structures, page 220, in the title of subclass 73, "guards" should read: *guides.*

In class 222, Dispensing, page 253e (1944), in the title of subclass 480, "diverte type" should read: *diverse type.* The title of subclass 513 should read: *For movable tubes, sleeves or apertured caps.*

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ERRATA AND MINOR CORRECTION SHEET

[January 1–June 30, 1944]

The following changes in the Manual of Classification, published 1940, made between January 1 and June 30, 1944, are noted. These changes should be made upon the indicated pages of the Manual. A page number followed by the year in brackets, e. g., 29 (1941), indicates that the page has been reprinted since 1940.

(NOTE.—Recently established class 222, design classes D1 to D93 inclusive, certain subclasses established and abolished in classes 28, 29, 30, 101, 102, 217, 218, 219, 220, and 223, and certain changes in "Classes alphabetically arranged" and "Classes numerically arranged", are not enumerated here inasmuch as such changes are included in new pages published for insertion in the Manual.)

ABOLISHED CLASSES

Class 165, Designs, page 201.

Class 221, Dispensing, page 253.

CANCELLATIONS

The following subclasses have been abolished and should be canceled in the Manual:
In class 75, Metallurgy, page 102, subclasses 127 and 131; page 103. subclasses 155 and 158.
In class 148, Metal Treatment, page 188, subclasses 19.9, 20, and 21.

In class 174, Electricity, Conductors and Insulators, page 207, subclasses 123, 125, 132, and 134.

ADDITIONS

The following subclasses have been established and should be inserted in the Manual:

In class 15, Brushing, Scrubbing, and General Cleaning, page 29 (1941):
Attachments
256.5 Moving surface scraper, wiper, or brush
256.6 Strand

In class 49, Glass, page 66:
Structure
92.5 Glass to metal joints

In class 57, Textiles, Spinning, Twisting and Twining, page 75:
Apparatus
With other operations
34.5 With waste- or loose end-collecting

In class 75, Metallurgy,
(Page 102)
Alloys
Ferrous
Processes
130.5 Iron chromium
133.5 Iron
(Page 103)
Alloys
Non-ferrous
Copper
Tin
Lead
156.5 Zinc
157.5 Zinc

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In class 103, Pumps, page 131:
Expansible chamber
Reciprocating piston
166.5 Flow controlling
In class 117, Coating; Processes and Miscellaneous Products, page 148b (1942):
Particular base or coating
Metal base
Wire, rod, or filament
128.4 Resinous coating (e. g., varnish)
128.7 Rubber or derivative containing coating
In class 148, Metal Treatment, page 188:
Solid metal
Heat treatment
Iron and its alloys
21.55 With quenching
In class 157, Wheelright-Machines, page 197:
1.5 For metallic spoked wheels
In class 174, Electricity, Conductors and Insulators, page 206:
Boxes and housings
With conduit or cable openings, coupling means or hole closures
65.5 Ceramic box or housing
In class 189, Metallic Building Structures, page 220:
Structural units
Joints and connections
36.5 Bonded metal to non-metallic joints

In class 200, Electricity-Circuit Makers and Breakers, (page 232)
Fluid pressure
81.4 Plural switch
81.6 Operable to cause liquid contact flow
81.8 Bourdon tube type (page 233)
Thermal
136.5 Combined with connector coupling
In class 210, Liquid Separation or Purification, page 243:
Filters
Strainers
Detachable
163.5 Drainers
205.5 Adjustable cover drainers
In class 226, Filling and Closing Portable Receptacles, page 256:
With fluent materials
Special types
65.5 Specially related filling device and receptacle
In class 287, Rod Joints or Couplings, page 318:
Flexible rod or strand
81 With eye forming thimble

ABOLISH SUBCLASS TITLE

In class 176, Electric Lamps, page 209:
Manufacture and Repair (the unnumbered title following subclass 1).

CHANGES OF TITLE

In class 10, Bolt, Nail, Nut, Rivet, and Screw Making, page 24, subclass 155 should read:
155 Bolt with nut and/or washer assembling or disassembling

In class 75, Metallurgy, subclasses 128, 133, 156, and 157, should read:

(page 102)
Alloys
Ferrous
Iron chromium
128 Nickel
Processes
133 Reduction to metal

(page 103)
Alloys
Non-ferrous
Copper
Tin
156 Lead
157 Zinc

In class 114, Ships, page 146, subclass 115 should read:
Sails and rigging
115 Clews

In class 131, Tobacco, page 169, subclass 248 should read:
Tobacco users' appliances
248 Cigar and cigarette end cutters, combined

In class 154, Laminated Fabric and Analogous Manufactures, page 194 (1943), subclass 50 should read:
Fabrics
50 Fluid-proof

CHANGES IN THE "CLASSES ARRANGED BY EXAMINING DIVISIONS" AT THE FRONT OF THE MANUAL

In Division 35, page 4 (1942), change "221. Dispensing" to read: *222. Dispensing.*

ERRATA

In class 4, Baths, Closets, Sinks and Spittoons, page 17, subclasses "156 Pump", "157, Neck supported", and "158 With scrubber" should all be coordinate with subclass "154 Curtain".

In class 24, Buckles, Buttons, Clasps, Etc., page 38 (1940), subclass "30 Wooden bands" should be coordinate with subclass "27 Wire".

In class 43, Fishing, Trapping, and Vermin Destroying, page 60, subclass "83.5 Automatic set" should be indented under subclass "81 Swinging striker", i. e., coordinate with "82 Direct-engaging latch".

In class 74, Machine Elements and Mechanisms, page 99, subclasses "281 Friction type, variable speed" and "282 Compound drive" should both be coordinate with "266 Spur type". Page 101, subclass "556 Releasable" should be indented under "555 Pivoted", i. e., coordinate with "551.6 Continuous".

In class 105, Railway Rolling Stock, page 136, the title of subclass 332 should read: *Convertible open and closed.*

In class 211, Supports, Racks, page 244, subclass "58 Rotatable" should be indented under "50 Card or sheet", i. e., coordinate with "57 With impaling means".

In class 301, Land Vehicles—Wheels and Axles, page 329, in the title of subclass 73, correct the spelling of "Plural".

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DEPARTMENT OF COMMERCE
UNITED STATES PATENT OFFICE

MANUAL OF
CLASSIFICATION OF PATENTS

Definitions of all revised classes, complete with changes made subsequent to the original publication of the class definitions, are open to the public in the Search-Room.

Revised classes include all classes except the following, which are undefined: 45, 55, 65, 73, 83, 100, 130, 137, 141, 171, 172, 173, 175, 177, 225, and Design Classes D 1 to D 93, inclusive.

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WASHINGTON 25, D. C.

CLASSES ARRANGED BY EXAMINING DIVISIONS

DIVISION 1

4. Baths, Closets, Sinks, and Spittoons
268. Closure Operators
53. Domestic Cooking Vessels
256. Fences
39. Gates
55. Harrows and Diggers
47. Plant Husbandry
111. Planting
97. Plows
275. Scattering Unloaders
182. Sewerage

DIVISION 2

119. Animal Husbandry
6. Bee Culture
17. Butchering
31. Dairy
43. Fishing, Trapping, and Vermin Destroying
100. Presses
68. Textiles, Fluid Treating Apparatus, subclass 241–277. (See Division 27 for other subclasses.)
131. Tobacco

DIVISION 3

252. Compositions; Subclasses 2–8.05, 62, 67–79, 182–306 372–408, (See Division 64 for other subclasses.
22. Metal Founding
148. Metal Treatment
75. Metallurgy

DIVISION 4

193. Conveyers, Chutes, Skids, Guides, and Ways
302. Conveyers, Fluid Current
198. Conveyers, Power Driven
187. Elevators
37. Excavating
227. Fire Escapes
294. Handling—Hand and Hoistline Implements
228. Ladders
214. Material or Article Handling
262. Mining, Quarrying and Ice Harvesting
243. Pneumatic Dispatch
304. Scaffolds
186. Store Service
212. Traversing Hoists

DIVISION 5

181. Acoustics
24. Buckles, Buttons, Clasps, Etc.
49. Glass
56. Harvesters
84. Music
274. Sound Recording and Reproducing
289. Tying Cords or Strands

DIVISION 6

260. Chemistry, Carbon Compounds (except subclasses 665–683, for which see Div. 31; subclasses 140–208, for which see Div. 43; subclasses 2–107, 209–235, 709–822, for which see Div. 50; subclasses 236–348, for which see Div. 59; and subclasses 112–123, 398–428, for which see Div. 63)

DIVISION 7

88. Optics
95. Photography

DIVISION 8

5. Beds
155. Chairs and Seats
45. Furniture
65. Kitchen and Table Articles
312. Supports, Cabinet Structures
211. Supports, Racks

DIVISION 9

230. Gas Pumps and Fans
253. Motors—Fluid
170. Motors—Fluid Current
103. Pumps

DIVISION 10

(Abolished Apr. 10, 1942, C. O. 3617)

DIVISION 11

12. Boot and Shoe Making
36. Boots, Shoes, and Leggings
218. Button, Eyelet, and Rivet Setting
54. Harness
149. Hides, Skins, and Leather
69. Leather Manufactures
1. Nailing and Stapling
231. Whips and Whip Apparatus

DIVISION 12

192. Clutches and Power-Stop Control, subclasses 116.5–150. (See Division 47 for other subclasses.)
123. Internal-Combustion Engines, subclasses 179 and 185. (See Divisions 18, 28, 45, and 48 for other subclasses.)
74. Machine Elements and Mechanisms (except subclasses 216.5–258, for which see Div. 45)

DIVISION 13

90. Gear Cutting, Milling, and Planing
205. Metal Drawing
80. Metal Rolling
29. Metal Working (except subclasses 84–89, for which see Division 29, and subclasses 148–189, for which see Division 14)
163. Needle and Pin Making
207. Plastic Metal Working
82. Turning

DIVISION 14

168. Farriery
153. Metal Bending
29. Metal Working, subclasses 148–189. (See Divisions 13 and 29 for other subclasses)
113 Sheet-Metal Ware, Making
245. Wire Fabrics and Structure
140. Wire Working

DIVISION 15

25. Plastic Block and Earthenware Apparatus
18. Plastics

DIVISION 16

178. Telegraphy (except subclass 44, for which see Division 65)
179. Telephony (except subclasses 2.5, 15, and 171.5, for which see Division 51, and subclasses 170 and 171, for which see Division 65)

DIVISION 17

93. Paper Manufactures
101. Printing
271. Sheet or Web Feeding or Delivering
270. Sheet-Metal Associating or Folding
199. Type Casting
276. Type Setting

DIVISION 18

123. Internal - Combustion Engines, subclasses 7 to 17. (See Divisions 12, 28, 45, and 48 for other subclasses)
121. Motors-Expansible-Chamber Type
60. Power Plants
264. Speed-Responsive Devices

DIVISION 19

110. Furnaces
158. Liquid and Gaseous Fuel Burners
126. Stoves and Furnaces

DIVISION 20

107. Bread, Pastry, and Confection Making
292. Closure Fasteners
70. Locks
16. Miscellaneous Hardware
109. Safes, Bank Protection, and Related Devices
27. Undertaking
154. Laminated Fabric and Analogous Manufactures, subclasses 1, 2.21–2.28, 20–32, 33.05, 33.1, 35–39, 41, 42–45.9. (See Division 55 for other subclasses.)

DIVISION 21

28. Textiles
87. Textiles, Braiding, Netting and Lace Making
26. Textiles, Cloth Finishing
19. Textiles, Fiber Preparation
66. Textiles, Knitting
57. Textiles, Spinning, Twisting, and Twining
139. Textiles, Weaving

DIVISION 22

244. Aeronautics
86. Ammunition and Explosive Charge Making
102. Ammunition and Explosive Devices
42. Firearms
89. Ordnance

DIVISION 23

235 Registers (except subclasses 1, 29–57, part 61, 61.5, 64–72, 74, 76–78, 79.5, 83–91, 92, all but electric multiplying machines, which remain in this division, 93–129 and 131–144, for which see Division 41)

DIVISION 24

2. Apparel
223. Apparel Apparatus
112. Sewing Machines

DIVISION 25

233. Centrifugal-Bowl Separators
209 Classifying, Separating, and Assorting Solids

DIVISION 25—Continued

202. Distillation
83. Mills
130. Threshing
146. Vegetable and Meat Cutters and Comminuters

DIVISION 26

171. Electricity-Generation (except subclasses 34, 95, 264-268, 270-273, 308, 309, for which see Division 34)
172. Electricity-Motive Power (except subclass 245, for which see Division 34)

DIVISION 27

300. Brush, Broom, and Mop Making
15. Brushing, Scrubbing, and General Cleaning
206. Special Receptacles and Packages
68. Textiles, Fluid Treating Apparatus (except subclasses 241-277, for which see Division 2)
38. Textiles, Ironing or Smoothing
141. Washing Apparatus

DIVISION 28

263. Heating
123. Internal-Combustion Engines (except subclasses 7 to 17, for which see Division 18; subclasses 179 and 185, for which see Division 12; subclasses 143–169, for which see Division 48; and subclass 196, for which see Division 45)
309. Machine Elements, Cylinders and Pistons
268. Metallurgical Apparatus

DIVISION 29

190. Baggage
79. Button Making
150. Cloth, Leather, and Rubber Receptacles
7. Compound Tools
147. Coopering
29. Metal Working, subclasses 84–89. (See Divisions 13 and 14 for other subclasses.)
224. Package and Article Carriers
81. Tools
157. Wheelwright Machines

DIVISION 29—Continued

143. Wood Sawing
142. Wood Turning
144. Woodworking
145. Woodworking Tools

DIVISION 30

236. Automatic Temperature and Humidity Regulation
257. Heat Exchange (subclasses 2–5. For all other subclasses see Division 32)
237. Heating Systems
240. Illumination
67. Illuminating-Burners.
297. Thermostats and Humidostats

DIVISION 31

260. Chemistry, Carbon Compounds, subclasses 665–683. (See Divisions, 6, 43, 50, 59, and 63, for other subclasses.)
196. Mineral Oils

DIVISION 32

259. Agitating
255. Earth Boring
261. Gas and Liquid Contact Apparatus
183. Gas Separation

DIVISION 32—Continued

257. Heat Exchange (except 5 for subclasses 2–5 which see Division 30)
166. Wells

DIVISION 33

14. Bridges
61. Hydraulic and Earth Engineering
72. Masonry and Concrete Structures
189. Metallic Building Structures
94. Roads and Pavements
108. Roofs
20. Wooden Buildings

DIVISION 34

171. Electricity, Generation, subclasses 34, 95, 264–268, 270–273, 308, 309. (See Division 26 for other subclasses.)
172. Electricity, Motive Power, subclass 245. (See Division 26 for other subclasses.)
191. Electricity-Transmission to Vehicles

DIVISION 34—Continued

213. Railway Draft Appliances
105. Railway Rolling Stock
246. Railway Switches and Signals
104. Railways
238. Railways, Surface Track
116. Signals and Indicators
291. Track Sanders

DIVISION 35

40. Card, Picture, and Sign Exhibiting
221. Dispensing
225. Dispensing Beverages
226. Filling and Closing Portable Receptacles

DIVISION 36

249. Automatic Weighers
265. Force Measuring
73. Measuring and Testing

DIVISION 37

200. Electricity-Circuit Makers and Breakers

DIVISION 38

117. Coating; Processes and Miscellaneous Products.
106. Compositions; Coating or Plastic (except subclasses 3–32, 124–285, 288–311, for which see Division 64)

DIVISION 39

50. Fluid-Pressure Regulators
277. Multiple Valves
251. Valves
137. Water Distribution

DIVISION 40

220. Metallic Receptacles
229. Paper Receptacles
217. Wooden Receptacles

DIVISION 41

194. Check Controlled Apparatus
133. Coin Handling
232. Deposit and Collection Receptacles
234. Recorders

DIVISION 41—Continued

235. Registers, subclasses 1, 29–57, part 61, 61.5, 64–72, 74, 76–78, 79.5, 83–91, 92 (except electric multiplying machines which are in Division 23), 93–129 and 131–144. (See Division 23 for other subclasses.)
197. Typewriting Machines

DIVISION 42

177. Electric Signaling

DIVISION 43

8. Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers
260. Chemistry, Carbon Compounds, subclasses 140–208. (See Divisions 6, 31, 50, 59, and 63, for other subclasses.)
52. Explosive, Pyrotechnic and Match Compositions

DIVISION 43—Continued

167. Medicines, Poisons, and Cosmetics (except subclasses 13–49, for which see Division 63)
127. Sugar, Starch, and Carbohydrates

DIVISION 44

62. Refrigeration

DIVISION 45

123. Internal-Combustion Engines, subclass 196. (See Divisions 12, 18, 28, and 48 for other subclasses.)
278. Land Vehicles, Animal Draft Appliances
298. Land Vehicles. Dumping
305. Land Vehicles, Wheel Substitutes
301. Land Vehicles, Wheels and Axles
184. Lubrication

DIVISION 45—Continued

74. Machine Elements and Mechanisms, subclasses 216.5–258. (For other subclasses see Division12.)
308. Machine Elements—Bearings and Guides
64. Machine Elements, Shafting and Flexible Shaft Couplings
78. Metal Forging and Welding
185. Motors
295. Railway Wheels and Axles
152. Resilient Tires and Wheels
267. Spring Devices
293. Vehicle Fenders

DIVISION 46

91. Coating, subclasses 1–67.8.
159. Concentrating Evaporators
169. Fire Extinguishers
299. Fluid Sprinkling, Spraying, and Diffusing
122. Liquid Heaters and Vaporizers

DIVISION 47

77. Boring and Drilling
188. Brakes
192. Clutches and Power-Stop Control (except subclasses 116.5–150, for which see Division 12)
303. Fluid Pressure-Brake and Analogous Systems
280. Land Vehicles
296. Land Vehicles, Bodies and Tops
180. Motor Vehicles

DIVISION 48

175. Electricity, General Applications (except subclass 354, for which see Division 54)
123. Internal-Combustion Engines, subclasses 143–169. (See Divisions 12, 18, 28, and 45 for other subclasses.)

DIVISION 49

34. Drying and Gas or Vapor Contacts with Solids

DIVISION 49—Continued

210. Liquid Separation or Purification
98. Ventilation

DIVISION 50

260. Chemistry, Carbon Compounds, subclasses 2–107, 209–235, 709–822. (See Divisions 6, 31, 43, 59, and 63 for other subclasses.)

DIVISION 51

250. Radiant Energy (except subclasses 27.5, 41.5, 42–108, 141–177, for which see Division 54)
179. Telephony, subclasses 2.5, 15, and 171.5. (See Divisions 16 and 65 for other subclasses.)

DIVISION 52

279. Chucks or Sockets
288. Joint Packings
41. Ornamentation
286. Packed Shaft or Rod Joints

DIVISION 52—Continued

285. Pipe Joints or Couplings
138. Pipes and Tubular Conduits
287. Rod Joints or Couplings
248. Supports
306. Tool-Handle Fastenings
284. Valved Pipe Joints or Couplings

DIVISION 53

11. Books, Making
281. Books, Strips, and Leaves
160. Closures, Partitions and Panels, Flexible and Portable
30. Cutlery
35. Education
216. Label Pasting and Paper Hanging
282. Manifolding
129. Paper Files and Binders
283. Printed Matter
120. Stationery
135. Tents, Canopies, Umbrellas, and Canes
132. Toilet

DIVISION 54

176. Electric Lamps
175. Electricity, General Applications, subclass 354. (See Division 48 for other subclasses.)
250. Radiant Energy, subclasses 27.5, 41.5, 42–108, 141–177. (See Division 51 for other subclasses.)

DIVISION 55

3. Artificial Body Members
32. Dentistry
154. Laminated Fabric and Analogous Manufactures except subclasses 1, 2.21–2.28, 20–32, 33.05, 33.1, 35–39, 41, 42–45.9, for which see Division 20.
128. Surgery

DIVISION 56

204. Chemistry, Electrical and Wave Energy

DIVISION 56—Continued

92. Paper Making and Fiber Liberation.

DIVISION 57

272. Amusement and Exercising Devices
46. Amusement Devices, Toys
10. Bolt, Nail, Nut, Rivet, and Screw Making
59. Chain, Staple, and Horseshoe Making
164. Cutting and Punching Sheets and Bars
85. Driven, Headed, and Screw-Threaded Fastenings
63. Jewelry
151. Nut and Bolt Locks

DIVISION 58

51. Abrading
215. Bottles and Jars
76. Metal Tools and Implements, Making
125. Stone Working

DIVISION 59

23. Chemistry
260. Chemistry, Carbon Compounds, subclasses 236–348. (See Divisions 6, 31, 43, 50, and 63 for other subclasses.)
71. Chemistry, Fertilizers
48. Gas, Heating and Illuminating (except subclasses 1–60, 180–189, 216, and 217, for which see division 64)

DIVISION 60

136. Batteries
219. Electric Heating
314. Electric Lamp and Discharge Devices, Consumable Electrodes
115. Marine Propulsion
290. Prime-Mover Dynamo Plants
201. Resistance and Rheostats

DIVISION 61

9. Boats and Buoys
58. Horology
115. Marine Propulsion
254. Pushing and Pulling Implements
258. Railway Mail Delivery
114. Ships
161. Time Controlling Mechanism
242. Winding and Reeling

DIVISION 62

273. Amusement Devices, Games
33. Geometrical Instruments
124. Mechanical Guns and Projectors
311. Supports, Tables

DIVISION 63

260. Chemistry, Carbon Compounds, subclasses 398–428. (See Divisions 6, 15, 31, 43, 50, and 59 for other subclasses.)
195. Chemistry Fermentation
99. Foods and Beverages, subclasses 1–233. (See Division 1 for other subclasses.)
167. Medicines, Poisons, and Cosmetics, subclasses 13–49. (See Division 43 for other subclasses.)
21. Preserving, Disinfecting, and Sterilizing.

DIVISION 64

252. Compositions, subclasses 1, 8.1–61, 63–66, 80–181, 302–371. (See Division 3 for other subclasses.)
106. Compositions; Coating or Plastic, subclasses 3–32, 123–285, 287–311. (See Division 38 for other subclasses.)
44. Fuel and Igniting Devices.
48. Gas, Heating and Illuminating, subclasses 1–60, 180–189, 216, and 217. (See Division 59 for other subclasses.)

DIVISION 65

174. Electricity, Conductors and Insulators.
173. Electricity, Connectors.
178. Telegraphy, subclass 44. (See Division 16 for other subclasses.)
179. Telephony, subclasses 170 and 171. (See Divisions 16 and 51 for other subclasses.)

DESIGNS DIVISION

Designs. (See pages 1 through 13, following page 347 (1943).)

8 (1944)

CLASSES ALPHABETICALLY ARRANGED

No.	Class	Division
51.	Abrading	58
181.	Acoustics	5
244.	Aeronautics	22
259.	Agitating	32
86.	Ammunition and explosive-charge making	35
102.	Ammunition and explosive devices	30
272.	Amusement and exercising devices	57
273.	Amusement devices, games	62
46.	Amusement devices, toys	57
119.	Animal husbandry	2
2.	Apparel	24
223.	Apparel apparatus	24
3.	Artificial body members	55
236.	Automatic temperature and humidity regulation	30
249.	Automatic weighers	36
190.	Baggage	29
4.	Baths, closets, sinks, and spittoons	1
136.	Batteries	60
5.	Beds	8
6.	Bee culture	2
8.	Bleaching and dyeing; fluid treatment and chemical modification of textiles and fibers	43
9.	Boats and buoys	61
10.	Bolt, nail, nut, rivet, and screw making	57
11.	Books, making	53
281.	Books, strips, and leaves	53
12.	Boot and shoe making	11
36.	Boots, shoes, and leggings	11
77.	Boring and drilling	47
215.	Bottles and jars	58
188.	Brakes	47
107.	Bread, pastry, and confection making	20
14.	Bridges	33
300.	Brush, broom, and mop making	27
15.	Brushing, scrubbing, and general cleaning	27
24.	Buckles, buttons, clasps, etc	5
17.	Butchering	2
218.	Button, eyelet, and rivet setting	11
79.	Button making	29
40.	Card, picture, and sign exhibiting	35
233.	Centrifugal-bowl separators	25
59.	Chain, staple, and horseshoe making	57
155.	Chairs and seats	8
194.	Check-controlled apparatus	41
23.	Chemistry	59
260.	Chemistry, carbon compounds	6, 15, 31, 43, 50, 59, 63
204.	Chemistry, electrical and wave energy	56
195.	Chemistry, fermentation	63
71.	Chemistry, fertilizers	59
279.	Chucks or sockets	52
209.	Classifying, separating, and assorting solids	25
134.	Cleaning and liquid contact with solids	27
292.	Closure fasteners	29
268.	Closure operators	1
160.	Closures, partitions and panels, flexible and portable	53
150.	Cloth, leather, and rubber receptacles	29
192.	Clutches and power-stop control	12
91.	Coating	46
117.	Coating; processes and miscellaneous products	38
133.	Coin handling	41
252.	Compositions	3, 64
106.	Compositions, coating or plastic	38, 64
7.	Compound tools	29
159.	Concentrating evaporators	46
193.	Conveyers, chutes, skids, guides, and ways	4
302.	Conveyers, fluid current	4
198.	Conveyers, power driven	4
147.	Coopering	29
30.	Cutlery	53
164.	Cutting and punching sheets and bars	57
31.	Dairy	2
32.	Dentistry	55
232.	Deposit and collection receptacles	41
	Designs. (See pages 1 through 13, following page 347 (1943).)	
222.	Dispensing	35
225.	Dispensing beverages	35
202.	Distillation	25
85.	Driven, headed, and screw-threaded fastenings	57
34.	Drying and gas or vapor contact with solids	49
255.	Earth boring	32
35.	Education	53
13.	Electric furnaces	60
219.	Electric heating	60
314.	Electric lamp and discharge devices, consumable electrodes	60
316.	Electric lamp and discharge devices, manufacture and repair	54
315.	Electric lamp and discharge devices, systems	54
176.	Electric lamps	54
177.	Electric signaling	42
320.	Electricity, battery and condenser charging and discharging	60
200.	Electricity, circuit makers and breakers	37
174.	Electricity—conductors and insulators	65
173.	Electricity, connectors	65
175.	Electricity—general applications	48
171.	Electricity—generation	26, 34
172.	Electricity—motive power	26, 34
191.	Electricity—transmission to vehicles	34
187.	Elevators	4
37.	Excavating	4
52.	Explosive, pyrotechnic, and match compositions	43
168.	Farriery	14
256.	Fences	1
226.	Filling and closing portable receptacles	35
42.	Firearms	22
227.	Fire escapes	4

No.	Class	Division
169.	Fire extinguishers	46
43.	Fishing, trapping, and vermin destroying	2
303.	Fluid-pressure brake and analogous systems	47
50.	Fluid-pressure regulators	39
299.	Fluid sprinkling, spraying, and diffusing	46
99.	Foods and beverages	1, 63
265.	Force measuring	36
44.	Fuel and igniting devices	64
110.	Furnaces	19
45.	Furniture	8
261.	Gas and liquid contact apparatus	32
48.	Gas, heating and illuminating	59, 64
230.	Gas pumps and fans	9
183.	Gas separation	32
39.	Gates	1
90.	Gear cutting, milling, and planing	13
33.	Geometrical instruments	62
49.	Glass	5
294.	Handling-hand and hoist-line implements	4
54.	Harness	11
55.	Harrows and diggers	1
56.	Harvesters	5
257.	Heat exchange	30, 32
263.	Heating	28
237.	Heating systems	30
58.	Horology	61
61.	Hydraulic and earth engineering	33
67.	Illuminating burners	30
240.	Illumination	30
123.	Internal-combustion engines	12, 18, 28, 45, 48
63.	Jewelry	57
288.	Joint packings	52
65.	Kitchen and table articles	8
216.	Label pasting and paper hanging	53
228.	Ladders	4
154.	Laminated fabric and analogous manufactures	20, 55
280.	Land vehicles	47
278.	Land vehicles—animal draft appliances	45
296.	Land vehicles—bodies and tops	47
298.	Land vehicles, dumping	45
305.	Land vehicles—wheel substitutes	45
301.	Land vehicles—wheels and axles	45
69.	Leather manufactures	11
158.	Liquid and gaseous fuel burners	19
122.	Liquid heaters and vaporizers	46
210.	Liquid separation or purification	49
70.	Locks	20
184.	Lubrication	45
74.	Machine elements and mechanisms	12, 45
308.	Machine elements, bearings and guides	45
309.	Machine elements, cylinders and pistons	23
64.	Machine elements, shafting and flexible shaft couplings	45
282.	Manifolding	53
115.	Marine propulsion	61
72.	Masonry and concrete structures	33
214.	Material or article handling	4
73.	Measuring and testing	36
124.	Mechanical guns and projectors	62
167.	Medicines, poisons, and cosmetics	43, 63
153.	Metal bending	14
205.	Metal drawing	13
78.	Metal forging and welding	45
22.	Metal founding	3
80.	Metal rolling	13
76.	Metal tools and implements, making	58
148.	Metal treatment	3
29.	Metal working	13, 14, 29
189.	Metallic building structures	33
220.	Metallic receptacles	40
266.	Metallurgical apparatus	28
75.	Metallurgy	3
83.	Mills	25
196.	Mineral oils	31
262.	Mining, quarrying, and ice-harvesting	4
16.	Miscellaneous hardware	20
180.	Motor vehicles	47
185.	Motors	45
121.	Motors—expansible-chamber type	18
253.	Motors—fluid	9
170.	Motors—fluid current	9
277.	Multiple valves	39
84.	Music	5
1.	Nailing and stapling	11
163.	Needle and pin making	13
151.	Nut and bolt locks	57
88.	Optics	7
89.	Ordnance	22
41.	Ornamentation	52
224.	Package and article carriers	29
286.	Packed shaft or rod joints	52
129.	Paper files and binders	53
92.	Paper making and fiber liberation	56
93.	Paper manufactures	17
229.	Paper receptacles	40
95.	Photography	7
285.	Pipe joints or couplings	52
138.	Pipes and tubular conduits	52
47.	Plant husbandry	1
111.	Planting	1

No.	Class	Division
25.	Plastic block and earthenware apparatus	15
207.	Plastic metal working	13
18.	Plastics	15
97.	Plows	1
243.	Pneumatic dispatch	4
60.	Power plants	18
21.	Preserving, disinfecting, and sterilizing	63
100.	Presses	2
290.	Prime mover dynamo plants	60
283.	Printed matter	53
101.	Printing	17
103.	Pumps	9
254.	Pushing and pulling implements	61
250.	Radiant energy	51, 54
213.	Railway draft appliances	34
258.	Railway mail delivery	61
105.	Railway rolling stock	34
246.	Railway switches and signals	34
295.	Railway wheels and axles	45
104.	Railways	34
238.	Railways, surface track	34
234.	Recorders	41
62.	Refrigeration	44
235.	Registers	23, 41
152.	Resilient tires and wheels	45
201.	Resistances and rheostats	60
94.	Roads and pavements	33
287.	Rod joints or couplings	52
108.	Roofs	33
109.	Safes, bank protection and related devices	20
304.	Scaffolds	4
275.	Scattering unloaders	1
182.	Sewerage	1
112.	Sewing machines	24
271.	Sheet or web feeding or delivering	17
270.	Sheet—material associating or folding	17
113.	Sheet-metal ware, making	14
114.	Ships	61
116.	Signals and indicators	34
274.	Sound recording and reproducing	5
206.	Special receptacles and packages	27
264.	Speed-responsive devices	18
267.	Spring devices	45
120.	Stationery	53
125.	Stone working	58
186.	Store—service	4
126.	Stoves and furnaces	19
127.	Sugar, starch, and carbohydrates	43
248.	Supports	52
312.	Supports, cabinet structures	8
211.	Supports, racks	8
311.	Supports, tables	62
128.	Surgery	55
178.	Telegraphy	16, 65
179.	Telephony	16, 51, 65
135.	Tents, canopies, umbrellas, and canes	53
28.	Textiles	21
87.	Textiles, braiding, netting and lace making	21
26.	Textiles, cloth finishing	21
19.	Textiles, fiber preparation	21
68.	Textiles, fluid treating apparatus	2, 27
38.	Textiles, ironing or smoothing	27
66.	Textiles, knitting	21
57.	Textiles, spinning, twisting and twining	21
139.	Textiles, weaving	21
297.	Thermostats and humidostats	30
130.	Threshing	25
161.	Time controlling mechanism	61
131.	Tobacco	2
132.	Toilet	53
306.	Tool-handle fastenings	52
81.	Tools	29
291.	Track sanders	34
212.	Traversing hoists	4
82.	Turning	13
289.	Tying cords or strands	5
199.	Type casting	17
276.	Typesetting	17
197.	Typewriting machines	41
27.	Undertaking	20
284.	Valved pipe joints or couplings	52
251.	Valves	39
146.	Vegetable and meat cutters and comminuters	25
293.	Vehicle fenders	45
98.	Ventilation	49
141.	Washing apparatus	27
137.	Water distribution	39
166.	Wells	32
157.	Wheelwright machines	29
231.	Whips and whip apparatus	11
242.	Winding and reeling	61
245.	Wire fabrics and structure	14
140.	Wire working	14
143.	Wood sawing	29
142.	Wood turning	29
20.	Wooden buildings	33
217.	Wooden receptacles	40
144.	Woodworking	29
145.	Woodworking tools	29

CLASSES AND SUBCLASS SCHEDULES

1 NAILING AND STAPLING.

43 **Lath and shingle nailing.**
44 **Glaziers'-point setters.**
Machines
Book
7 Staple forming and setting,
8 Staple setting,
Box
8.1 Blank assembling
8.2 Wire bound
8.3 Tables,
14 Assembling and nailing,
9 Nail forming and driving,
11 Staple forming and setting
12 Sheet metal,
10 Nail driving
16 Nail feeding,
15 Tables,
13 Staple setting,
13.5 Basket and barrel
13.6 Staple forming and setting,
Shoe
33 Heel pressing and loading,
34 Heel-plate attaching,
32 Heel nailing
35 Crosshead and turret,
36 Crosshead,
37 Laterally adjustable driver block,
38 Multiple rotary heel support,
39 Nail feeding
39.1 Single source, gang delivery,
25 Wire inserting and cutting
26 Screw.

1. NAILING AND STAPLING—Con.

Machines
Shoe
27 Wire-nail forming and driving
27.5 String nailers,
28 Direct wire feed,
29 Pivoted nail carrier,
30 Reciprocating nail carrier,
31 Rotary nail carrier,
Strip
22 Nail,
23 Peg,
24 Tack,
24.5 Strips,
20 Staple forming and setting,
19 Nail driving
18 Magazine
18.1 Multiple drivers,
18.2 Shank-stiffener assembling,
21 Staple setting,
41 Work supports,
Blind slat and rod
54 Staple forming and setting,
55 Staple setting,
40 Packet looping,
2 Staple forming and setting
2.1 Desk type
2.2 Wire,
2.3 U strip,
1 Nail driving
6 Nail feeding,
5 Boxes,
4 Staple setting
3 Magazine,
3.1 Staple feeding.

1. NAILING AND STAPLING—Con.

45 **Magazine-hammers.**
Implements
45.5 Fabric gripping
45.6 Magazine,
51 Wire-nail forming and driving
51.5 String nailers.
48 Staple forming and setting,
Strip
52 Nail and peg,
53 Tack,
47 Nail driving
46 Magazine
46.1 Pneumatic,
50 Staple setting
49 Magazine,
49.1 Surgical clip appliers.
49.4 **Belt-hook inserters.**
49.5 **Nail loaders**
49.6 Implements.
49.7 **Nail strippers.**
56 **Packages.**

2 APPAREL.

1 **Miscellaneous.**
2 **Guards and protectors**
3 Head
4 Insect repelling,
5 Firemen's helmets,
6 Military or aviators' helmets,
7 Heat resistant
8 High temperature,
9 Face,
Eye shields
10 Hat or cap attachments,
11 Hand or body supported,
12 Shades
13 Spectacle attachments,
14 Goggles,
15 Hoodwinks or blinds,
16 Hand or arm
17 Handle or rein attachments,
18 Boxing gloves,
19 Baseball gloves,
20 Hand pads,
21 Finger cots or protectors,
22 Leg
23 Trouser attachments,
24 Knee pads or rests.
25 **Compressors**
26 Corsets
27 Abdominal supporting type,
28 Form shaping
29 Hip or thigh reducing,
30 With breast-supporting features
31 Nursing,
32 With shoulder braces.

2. APPAREL—Continued.

Compressors

Corsets

33 With hose supporters,
34 Materials,
35 Patterns,
36 Stiffening and staying,
37 Elastic features,
38 Closures
39 Lacing type,
40 Shields,
41 Abdominal supporters,
42 Brassieres and supports,
43 Belts and girdles.

Body braces and supports

44 Shoulder and back,
45 Shoulder.
46 **Garment protectors**
47 Skirts,
48 Aprons
49 Bibs,
50 Barbering,
51 Workmen's,
52 Ties and supports,
53 Armpit shields
54 Combined with garments,
55 Body supported,
56 Dress-attaching features
57 Frames,
58 Methods of making,
59 Sleeve,
60 Collar or cuff,
61 Stocking,
62 Knee,
63 Try-on hat linings.
64 **Burial garments.**
65 **Fur garments**
66 Muffs.
67 **Bathing garments**
68 Caps.

2. APPAREL—Continued.

69 **Body garments**

Union type

70 Separable,

Skirted

71 Combined bifurcated,
72 Convertible bifurcated,
73 Underwear,
74 Dresses,
75 Children's,
76 Waistbands, adjustable or elastic,

Bifurcated

77 Men's outer shirts,
78 Underwear,
79 Trousers and overalls,
80 Children's,
81 Heat resistant,
82 Water resistant,
83 Bed garments,

84 Hooded,
85 Overcoats
86 Convertible to bifurcated,
87 Waterproof,
88 Capes
89 Convertible tents,
90 Sweaters,
91 Mufflers,
92 Back and chest protectors,
93 Coats
94 Hunters' and special-article carrying,
95 Combined with vest or shirt,
96 Front closures,
97 Linings,
98 Collars
99 Springs,
100 Fasteners,
101 Putting-on accessories,

2. APPAREL—Continued.

Body garments

102 Vests
103 Combined with shirt or dickey,

Waists

104 Nursing,
105 Dress,
106 Blouses
107 Garment supporting,
108 Jacket type,
109 Underwear
110 Corset covers,
111 Infants',
112 Garment supporting,

Shirts

113 Undergarments,
114 Bed garments,
115 Men's outer garments
116 With attached collars,
117 With garment supporters,
118 Bosom structure
119 Detachable,
120 Supporters and protectors,
121 Overlaps,
122 Yokes, patches, and facings,
123 Cuffs
124 Detachable,
125 Sleeves
126 Detachable,
127 Neckbands,
128 Closures,
129 Collars
130 Combined with neckties,
131 Soft fold type
132 Supporters,
133 Women's wear
134 Supporters,
135 Waterproof,
136 Paper,

2. APPAREL—Continued.

Body garments

Collars

137 Necktie-engaging devices
138 Easy-slide structure,
139 Attaching to shirts
140 Ends,
141 Closures,
142 Bindings,
143 Blanks and processes,
144 Neckties
145 Attaching features,
146 Cut-fabric type,
147 Knit-fabric type,
148 Knot structure
149 Made up
150 Four-in-hand type,
151 Bow type,
152 Forms and retainers
153 Four-in-hand type,
154 Bow type,
155 Band structure
156 Attachments,
157 End structure.

Hand or arm coverings

158 Mittens,
159 Gloves
160 Attachments,
161 Workmen's,
162 Wrists,
163 Fingers,
164 Linings,
165 Welts,
166 Staying,
167 Materials
168 Rubber,
169 Patterns and processes,
170 Wristlets.
171 **Head coverings**
172 Flapped,

2. APPAREL—Continued.

Head coverings

173 With masks,
174 Toilet,
175 Hats
176 Ventilating,
177 Shade,
178 Brim bindings,
179 Bands,
180 Frames,
181 Sweats
182 Ventilating,
183 Head size adjustment,
184 Sewing,
185 Attachments
186 Trimmings,
187 Covers,
188 Hangers,
189 Guard cords,
190 Linings or tips,
191 Extension brims,
192 Materials and processes
193 Straw type,
194 Cloth or felt type,
195 Caps
196 Convertible,
197 Adjustable size,
198 Women's wear,
199 Attachments,
200 Materials
201 Knitted,
202 Hoods
203 With mufflers,
204 Bonnet type,
205 Helmet type,
206 Face coverings,
207 Scarfs and veils,
208 Muffs
209 Ear.

2. APPAREL—Continued.

Nether garments

210 Bustles,
211 Skirts
212 Combined bifurcated,
213 Convertible bifurcated,
214 Riding,
215 With pads or distenders,
216 Hoop,
217 Lifters and holders,
218 Placket closures,
219 Waist closures,
220 Waistbands
221 Adjustable or elastic.
222 Edge bindings or protectors,
223 Supporters,
Bifurcated
224 Underwear
225 Reinforcing,
226 Elastic inserts,
227 Trousers or overalls
228 Knee length,
229 Waist or shirt supported,
230 Suspender attachments,
231 Stays or protectors
232 Bottom,
233 Leg-straightening attachments,
234 Flies,
235 Waist closures,
236 Waistbands
237 Adjustable or elastic,
238 Trunks,
239 Stockings
240 Supporting features,
241 Reinforcing,
242 Leggings.

2. APPAREL—Continued.

Garment supporters and retainers

300 Combined with other than garment supporter structure,
301 Convertible or reversible,
302 Rigid vertical type
303 Hose supporting,
304 With connected substantially spaced holders for plural garments
305 Combined with shoulder straps,
306 Supporting two hose only,
307 Plural waistline garment only,
308 Plural encircling type,
309 Partially encircling limb or torso type,
310 Shoulder suspension and torso encircling,
311 Torso or limb encircling
312 With additional holding devices or features
313 Pendant limb encircling means,
314 With pendant holding means
315 With plural holding means,
316 Wrap around and end attached holder,
317 With member between ends of encircling strip,
318 On member between ends of encircling strip,
319 Detachable from or slidable on belt,
320 With non-fastening holding means,
321 With fastenable device to form loop
322 Overlapping end and buckle type,
323 Strip connected spaced holders
324 With springs,

2. APPAREL—Continued.

Garment supporters and retainers

Strip connected spaced holders
325 With step adjustment,
326 Plural, crossed or diverging suspension strips or strands
327 Crossed or closed loop shoulder type
328 With crossed suspension strap features,
329 Garment supporting running strip or strand,
330 With running strip or strand
331 Plural loop type,
332 Connection at bottom of strip or strand V.
333 With detachable or movable feature between strips
334 With pivot member normal to strip,
335 Hose supporting,
336 Elements
337 Friction devices and/or twisters,
338 Belt, strap or strip constructions
339 With springs or connected sections
340 Suspender ends,
341 Saddle type cord retainers
342 Openable or movable.
243 **General structure and methods**
244 Trimmings
245 Shoe ornaments,
246 Insignia,
247 Pockets
248 Reinforced,
249 Article-attaching feature,
250 Article-retaining feature,
251 Fastening attachments,
252 Closing attachments,

2. APPAREL—Continued.

General structure and methods

Pockets
253 Multiple compartment,
254 Safety trap,
255 Stiffening or staying
256 Stiffeners
257 Ends and fasteners,
258 Materials
259 Steel
260 Coated or covered,
261 Reinforced,
262 Hinged,
263 With fasteners,
264 Formed wire,
265 Attaching buttons or fasteners
266 Buttonhole strips,
267 Pads
268 Shoulder,
Sleeves or legs
269 Adjustable length,
270 Closures,
271 Loops or hangers,
272 Linings.
273 Dress weights,
274 Bindings,
275 Seams
276 Reinforced,
278 **Miscellaneous trimming stock.**

3 ARTIFICIAL BODY MEMBERS.

1 Miscellaneous.
2 Legs
3 Socketed,
4 Extensions
5 Foot,
6 Feet
7 Resilient
8 Fluid,
9 Sockets
10 Slip,
11 Suspenders.
12 Arms and hands.
13 Eyes.

4 BATHS, CLOSETS, SINKS, AND SPITTOONS.

1 Miscellaneous.
2 Closet bowl, tub, and basin.
3 Closet bowl and basin.
4 Tub and basin.
5 Tub and sink.
6 Bidets
7 Jet.
8 Railway-train closets.
9 Closets
10 Water-closets
11 Plural,
12 Combined tank and bowl
13 Integral,
14 Siphon bowl
15 Air exhauster for siphon,
16 Plunger bowl,
17 Valved bowl,
18 Tanks
19 Normally empty
20 Pressure tank
21 Seat operated
22 Siphon bowl,
23 With drainer,
24 Seat operated
25 With drain,
26 Pressure tank
27 Float-released outlet valve,
28 Float outlet valve,
29 Valve held open by flow,
30 Motor-controlled outlet valve,
31 Dashpot - controlled outlet valve.
32 Dumping tank,
33 Controlled by weight of liquid,
34 Plural flushers
35 Compartment tank,
36 Outlet siphon,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Closets

Water-closets
Tanks
Plural flushers
37 Float outlet valve,
38 Dashpot outlet valve,
39 Compartment, alternate,
40 Compartment, in series,
41 Conjoined supply and outlet valve,
42 Outlet siphon
43 Air bound,
44 Jet starter,
45 Float-valve-releasing starter,
46 Plunger starter,
47 Water-displacer starter,
48 Water-elevator starter,
49 Outlet-valve starter,
50 Bodily movable siphon,
51 Seat operated,
52 Outlet valve
53 Latched open, released by float
54 Seat operated,
55 Latched open, released by weight,
56 Float
57 Overflow at side,
58 Overflow through valve,
59 Seat operated,
60 Overflow through valve
61 Dashpot,
62 Overflow at side, dashpot,
63 Shifting weight,
64 Seat operated,
65 Held open by flow,
66 Rotary retarder,
67 Operator,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Closets

Water-closets
Tanks
68 Structure and supports,
69 Siphon bowl
70 With flush valve,
71 Extra trap or false trap,
72 Ventilated,
73 Siphon jet,
74 With check valve,
75 Overflow preventer,
76 Valved bowl
77 Pump
78 Portable closet,
79 Flush valve
80 Portable closet,
81 Float controlled,
82 Seat operated,
83 Ventilated,
84 Pivoted valve
85 Pan type,
86 Plunger bowl
87 Flush valve
88 Float controlled,
89 Washout bowl
90 Pump,
91 Series,
92 Flush valve,
93 Pan bowl and trap
94 Ventilated,
95 Trap,
96 Ventilated,
97 Bowl with side receptacle,
98 Combined bowl and seat,
99 Urinals
100 Automatic flush tank
101 Periodic flush,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Closets

Water-closets
Urinals
102 Bowl
103 Ventilated,
104 Vertical wall
105 Ventilated,
106 Ventilated,
107 Pivoted,
108 Pedal-operated flush,
109 Disinfectants or screens,
110 Portable,
111 Dry closets
112 Bedpans
113 Cushioned,
114 Automobile,
115 Chemical,
116 Field,
117 Plural
118 Drier or burner,
119 With urinal
120 Separate receiver,
121 Magazine
122 Furniture,
123 Valved bowl,
124 Movable receiver,
125 Seat operated,
126 Cover operated,
127 In cover,
128 Valved bowl
129 Ventilated,
130 Seat or cover operated
131 Drier or burner,
132 Vault
133 Ventilated,
134 Chair,
135 Inclosed receptacle
136 Ventilated,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Closets

Dry closets
Inclosed receptacle
137 Vessel,
138 Receptacle
139 Muffled for liquid,
140 Ventilated,
141 Vessels,
142 Flexible material,
143 Seat subclosure
144 Seat or cover operated,

Bathing apparatus

145 Shower baths
146 Cabinet
147 Pump,
148 With bathtub
149 Curtain,
150 Rim discharge,
151 Elevated tank,
152 Cage spray
153 Curtain,
154 Curtain
155 Pump,
156 Pump,
157 Neck supported,
158 With scrubber,
159 Head washers and supports,
160 Vapor or hot-air baths
161 With shower,
162 With bathtub,
163 Recumbent,
164 Erect, with head outside.
165 Body member,
166 Basins
167 Washstand
168 Pivoted,
169 Pivoted,
170 Supports,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Bathing apparatus

171 Sea baths,
172 Tank baths,
173 Tubs
174 Couch,
175 Cabinet
176 Pivoted tub,
177 Flexible material,
178 Rocking or agitating,
179 Heater,
180 Gas injector,
181 Rim supply,
182 Foot bath,
183 Partition,
184 Body scrubbers,
185 Supports, mats, and seats,
186 Legs.

187 **Sinks**

188 Pivoted,
189 Drainer,
190 Strainer.

191 **Bath, basin, and receptacle fittings**

192 Hot and cold supply
193 Compartment tub,
194 Outlet valve,
195 Supply and outlet
196 Bottom supply,
197 Outlet valve and trap,
198 Outlet valve and overflow
199 Valve operator in overflow,
200 Valve operator outside,
201 Overflow valve in receptacle,
202 Overflow valve outside,
203 Outlet valve, operator outside receptacle,
204 Outlet valve or plug, operator inside receptacle,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Bath, basin, and receptacle fittings

205 Outlet valve or plug, float operated,
206 Receptacle overflow, closure or trap,
207 Airbound trap,
208 Compartment-tub outlet.

209 **Ventilation**

210 Railway car,
211 House plumbing

213 Electric-motor pump,
214 Water-motor pump,
215 Water-jet pump,
216 Bowl structure or vent valve,
217 Seat structure,
218 Roof outlet.
219 Sewer
220 Disinfecting,
221 Burner.

222 **Disinfection**

223 Dispensing to bowl,
224 Combined with flusher,
225 Dispensing to flush pipe,
226 Chemical holder in flush pipe,
227 Dispensing to flush tank,
228 Chemical holder in flush tank,
229 Chemical holder in seat.
230 Chemical holder in cover,
231 Chemical holder suspended in bowl,
232 Chemical chamber formed in bowl,
233 Seat and cover treating.

234 **Seats and covers**

235 Plural seats,
236 Hinges.

237 **Seats**

238 Subclosure, seat operated,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Seats

239 Superposed,
240 Hinges,
241 Counterbalanced.

242 **Covers for seats**

243 Destructible material
244 Pad
245 On seat,
246 On main cover,
247 Roll.

248 **Buffers and dashpots.**

249 **Flush-valve operators**

250 Seat operated.

251 **Seat and cover operators.**

252 **Closet-bowl supports, couplings, and drip catchers.**

253 **Closet-bowl closures.**

254 **Closet head, foot, and body rests.**

255 **Obstruction removers and closures**

256 Water supply,
257 Closet bowl.

258 **Spittoons**

259 Pocket,
260 Bar,
261 Disinfecting,
262 Flushing
263 Dental
264 Rotary member,
265 Hand pump,
266 Flush valve and outlet valve,
267 Covered
268 Floor orifice.
269 Valved outlet
270 Receptacle,
271 Hand operated,
272 Pedal operated
273 Two-part cover,
274 Flexible material and holder,

4. BATHS, CLOSETS, SINKS, AND SPITTOONS—Continued.

Spittoons
275 Floor orifice
276 Valved outlet,
277 Receptacle,
278 Agitator,
279 Reversible,
280 Floor controlled valve,
281 Gravity controlled valve,
282 Positively operated inlet valve,
283 Trapped liquid,
284 Gravity receptacle,
285 Flexible material and holder.
286 Strainers and stoppers
287 Combined strainer, plug, or valve,
288 Combined strainer and pipe coupling,
289 Strainers in series,
290 Strainer, receptacle,
291 Depending,
292 Strainer,
293 Covers
294 Disinfecting,
295 Plugs,

5 BEDS.

Beds
1 Miscellaneous,
2 Combination furniture
3 Table beds
4 Outfolding sides,
5 Unfolding top,
6 Folding bed inclosed,
7 Sofa form,
8 Nested, twin, and stacked,
9 Berths and bunks,
10 Window, floor, ceiling, and room to room,
11 Adjustable height,
12 Sofa beds
13 Link-supported unfolding,
14 Beds stowed under seat,
15 Suspended bottoms,
16 Vertical unfolding sections,
17 Extension
18 Slidable sections
19 Front and back extension,
20 Slide with rotation,
21 Change of level,
22 Link walk-over,
23 Traversing seat with rotary follower section,
24 Rotary seats
25 Unfolding sections on seat bottom,
26 Seat rotators,
27 Pivoted seat over forward invertible section,
28 Unfolding seat
29 Leg supported,
30 Extension supported,
31 With rising inner section
32 Pivoted hinge plate,

5. BEDS—Continued.

Beds
Sofa beds
Unfolding seat
With rising inner section
33 Inner-section seat post,
34 Intermediate-section seat post,
35 Double unfolding (including zigzag),
36 Double unfolding with rising inner section,
37 Reverting back
38 Leg supported,
39 Extension supported,
40 Wing supported,
41 Extension seat,
42 Unfolding seat,
43 Forward-turning back
44 Advancing and unfolding seat,
45 Traversing over seat,
46 Carried by seat to alignment,
47 Sliding and pivoting back
48 Increasing seat,
49 Drop or standing leaf,
50 Drop leaf only,
51 Elements
52 Sofa heads and arm rests,
53 Headboards and footboards,
54 Front boards,
55 Locks,
56 Assisting springs,
57 Hinges,
58 Receptacles, drawers, and compartments,
59 Shiftable backs and seats
60 Invalid beds
61 Patient turners,
62 Tilting frame,

5. BEDS—Continued.

Beds
Invalid beds
63 Vertically moving frame
64 Independent end lift,
65 Lowerable,
66 Sectional
67 Adjustable head and foot sections
68 Independent adjustment,
69 Adjustable leg and thigh sections
Head sections
70 Combined back rest and table,
71 Free,
72 Attached
73 Movable foot,
74 Rack adjustment,
75 Pivoted ratchets,
76 Direct cable actuation,
77 Actuated pivoted prop,
78 Spring or weight actuation,
79 Cam and screw actuated,
80 Foot sections,
81 Invalid lift and transfer
82 Field stretchers,
83 Hoisting devices
84 Attachable,
85 Detached surrounding frames,
86 Free traveling,
87 Cranes,
88 Winding hoists,
89 Stretcher bottoms and slings,
90 Toilets,
91 Invalid mattresses,
92 Accessories,
93 Cribs
94 Automobile,

5. BEDS—Continued.

Beds
- Cribs
  - 95 Bedstead attached
    - 96 Substowage,
  - 97 Closed,
  - 98 Fabric,
  - 99 Folding,
  - 100 Movable guards,
- 101 Cradles
  - 102 Folding,
  - 103 Link supported,
  - 104 Spring supported,
  - 105 Rocker base
    - 106 Throw-off rockers and locking devices,
    - 107 Attachable rocker.
  - 108 Rocking devices
    - 109 Mechanical motors,
- 110 Cots
  - 111 Sectional,
- 112 Camp beds
  - 113 Canopied,
  - 114 Knockdown,
  - 115 Lazy-tong supports,
  - 116 Transverse collapse
    - 117 Sectional rails,
- 118 Vehicle attached
  - 119 Outside,
- 120 Hammocks
  - 121 With canopy,
  - 122 Fabric hammocks
    - 123 Spreaders,
  - 124 Couch hammocks
    - 125 Adjustable back or windshield.
    - 126 Convertible to bedstead,
  - 127 Supports
    - 128 Hammock and canopy support,
    - 129 Subsupport,
    - 130 Ends and ridgepole,

5. BEDS—Continued.

Beds
- 131 Bedsteads
  - 132 Three part,
  - 133 Upending
    - 134 Tumble over,
    - 135 Detachable,
    - 136 Pivoting,
    - 137 Shifting fulcrum
      - 138 Successive pivoting,
      - 139 Single struts,
      - 140 Strut and guide,
      - 141 Suspending link and guide,
      - 142 Double links,
      - 143 Single guide,
      - 144 Double guide,
    - 145 Traveling foot,
    - 146 Sliding frame on upending carrier,
    - 147 Sliding and pivoted frame,
    - 148 Pivoted frame on collapsing head and foot,
    - 149 Sectional
      - 150 Upending major section,
      - 151 Outfolding sides
        - 152 Fixed pivots,
        - 153 Moving pivots,
      - 154 Falling center,
      - 155 Pivoted inner with outfolding foot section,
      - 156 Laterally increasing,
      - 157 Telescoping,
      - 158 Flexible upward sliding,
    - 159 Cases
      - 160 Front panels,
      - 161 Wing fronts,
    - 162 Stands,
    - 163 Screens and curtains,
    - 164 Counterbalance spring
      - 165 Tension bottoms,

5. BEDS—Continued.

Beds
- Bedsteads
  - Upending
    - 166 Counterbalance weights,
    - 167 Locks,
    - 168 Base props,
    - 169 Suspended bottoms,
    - 170 Shifters
      - 171 Door beds,
      - 172 Jamb rounders,
      - 173 Rotary bases,
  - 174 Folding
    - 175 Extension,
    - 176 Transverse collapse,
    - 177 Horizontal infolding side rails,
    - 178 Folding head and foot
      - 179 Folding legs and ends
        - 180 Cofolding legs and ends,
  - 181 Extension
    - 182 Lazy tongs,
    - 183 Extensible headboards,
    - 184 Extension side rails,
    - 185 Lateral sections,
  - Bed bottoms
    - Fabricated elastic flats
      - 186 Surfaces
        - 187 Canvas,
        - 188 Linkages,
        - 189 Continuous spring elements,
        - 190 Cables and cords,
        - 191 Thin strips,
        - 192 Edgings, midribs, and center strips,
        - 193 Guards,
      - 194 Binding and fastening
        - 195 Folding strips,
        - 196 Clamping strip,
        - 197 Groove and strip,

5. BEDS—Continued.

Beds
- Bedsteads
  - Bed bottoms
    - Fabricated elastic flats
      - Binding and fastening
        - 198 Slit tubes,
        - 199 Marginal spring connections and limiting springs,
      - 200 Frames
        - 201 Knockdown,
        - 202 Sectional folding or extensible,
        - 203 Braces,
        - 204 Dropped-truss side rails.
        - 205 Corner risers
          - 206 Stamped metal,
        - 207 Frame hangers, supports, and retainers
        - 208 Rigid frame extension supports,
        - 209 Shiftable on frame or riser,
        - 210 Spring,
      - 211 Tighteners
        - 212 Cord take-up,
        - 213 Lever and screw,
        - 214 Lever,
        - 215 Depression self-tightener.
        - 216 Roller
          - 217 Rolling bedstead rails,
          - 218 Riser mounting,
          - 219 Attachable,
        - 220 Screw
          - 221 Attachable,
          - 222 Extensible rods or trusses,
          - 223 Individual element,
          - 224 Sliding riser,
          - 225 Sliding end rail,

5. BEDS—Continued.

Beds
Bedsteads
Bed bottoms
Fabricated elastic flats
226 Reinforces
227 Cable systems,
228 Edge spreaders,
229 Subcoils,
230 Of fabrics and springs
231 Underslung spring supports,
232 Yielding rail,
233 Marginal spring tension,
234 Leaf-spring supports,
235 Connecting fabric to tops of coil springs,
236 Of slats
237 Bowed spring slats,
238 Hangers and engagers,
239 Of slats and springs
240 Collapsible or extensible frameworks,
241 Independent slats with spring supports
242 With leaf springs,
243 With subcoil springs,
244 Rigid slat-frame tops,
245 Attaching slats to spring coils,
246 Of springs
247 Nonspiral springs only,
248 Spiral springs only
249 Frames, sectional and collapsible
250 Folding,
251 Variable width or length,
252 Intermediate frames and connections,
253 With accessory spring shock absorbers,

5. BEDS—Continued.

Beds
Bedsteads
Bed bottoms
Of springs
254 Elements
255 Springs, nonspiral,
256 Springs, spiral,
257 Top-coil unions,
258 Top saddles,
259 Connecting clips (plate and wire),
260 Margin rims and connections,
261 Restrainers and limiters,
262 Lateral upper-frame braces,
263 Bottom spring supports
264 Bars,
265 Bar and wire,
266 Wire,
267 Top connections
268 Twin and continuous springs
269 Helical connectors,
270 Links or clips,
271 Extended coils,
272 Top coil extended and guy,
273 Guy with extended loops,
274 Zigzag guy,
275 Central cross strips and wires,
276 Parallel cross groups,
277 Two and one cross elements,
278 Equalizers,
279 Elements and details
280 Panels, inserts, and mirrors,

5. BEDS—Continued.

Beds
Bedsteads
Elements and details
281 Post tops and ornaments,
282 Joints and connections,
283 Filler bars,
284 Heating and cooling devices,
285 Knockdown and removable parts,
286 Side-rail and frame-rail construction
287 Exhibition couplers,
288 Corner fastenings
289 Chill fasteners,
290 Post boxes,
291 Rail boxes and hoods,
292 Rails interengaging within posts,
293 Rail-entering post stubs,
294 Post hooks,
295 Interlocking fingers,
296 Rail hooks,
297 Swinging hooks,
298 Drawbars,
299 Keyhole, bayonet, and open-top slots,
300 Dovetails,
301 Post clamps,
302 Rotating rails,
303 Pins and pintles,
304 Brackets,
305 Bedstead braces
306 Cable systems,
307 Link systems,
308 Receptacles, drawers, and compartments,
309 Antinoise devices and buffers,
310 Legs
311 Sliding disappearance,

5. BEDS—Continued.

Beds
Bedsteads
Elements and details
Legs
312 Pivoted
313 Link control,
314 Slot and shoulder or socket.
315 Latches,
316 Jointed braces,
Bed attachments and accessories
317 Miscellaneous,
318 Clothes racks,
319 Bedclothes supports,
320 Bedclothes holders,
321 Suspended airers,
322 Mattress fasteners and floppers,
323 Mattress and bed turners,
324 Stowage,
325 Pillow holders,
326 Pillow-sham holders,
327 Body rests and supports,
328 End jacks and movers,
329 Partitions,
330 Screens,
331 Side guards,
332 Bed tables and seats,
333 Valances,
334 Bed clothing
335 Detachable covers and dirt guards,
336 Restraining sheets,
337 Pillows
338 Physiological,
339 Covers,
340 Bolster rolls,
341 Compartmented,
342 Covered spring cores,
343 Sleeping bags
344 Ground mats,

5 BEDS—Continued

Beds

345 Mattresses
347 Ventilation, inspection, and heating
348 Fluid content
349 Parallel-strip ties
350 Point ties and braces
351 Spring
352 Sectional hinged and rearrangeable
353 Cellular
354 Spring-top covers and cover pads
355 Filled or stuffed
356 Tufting
357 Sectional and rearrangeable parts
358 Plaited covers
359 Partitions
360 Edgings and edge rolls
361 Filling materials
362 Mosquito nets and canopies
363 Actuated
364 Baby carriage

6 BEE CULTURE

1 **Beehives**
2 Frames
3 Pivoted
4 Entrances and exits
5 Bee feeders
6 Stands

Appliances

7 Swarm
8 Hive connectors
9 Queen-bee cells and cages
10 Comb frames
11 Comb foundation
12 Implements

7 COMPOUND TOOLS
1 **Miscellaneous**
3 **Plier type**
4 Modified handles
5 Pivoted auxiliary tools
5.1 With cutter
5.2 Nipper
5.3 Shear
5.4 With cutter
5.5 Nipper
5.6 Shear
6 Scissors
6.1 With comb
6.2 With receptacle closure remover
7 **Monkey wrench**
7.1 With cutter
8 **Hammer**
8.1 With cutter
9 Fixed form
10 **Miner's candlestick**
11 **Pocketknife**
12 **Crowbar**
13 **Handsaw**
14 **Fork**
14.1 **Cutters combined with other tools**
14.2 Can opener cutter
14.25 With receptacle closure remover
14.3 With hook
14.4 With pitch fork
14.5 With thimble
14.55 With spade or shovel
14.6 **With receptacle closure remover**
15 **Holders**
16 Pivoted tools
17 **Integral**

8 BLEACHING AND DYEING; FLUID TREATMENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS

Dyeing processes and compositions

1 **Dyeing processes and compositions**
2 Wave energy
3 Non-textiles
4 Plastics or resins
5 Rubber
6 Oils, fats or waxes
6.5 Wood (including stains)
7 Paper
8 Siliceous or calcareous material
9 Eggs
10 Skins, hair, furs or feathers
11 With oxidation dyes
12 Leather
12.5 With tanning
13 With azo dyes
14 Effect coloring
15 Cross-dyeing
16 Marbleizing
17 Combined processes
18 Dyeing and coating, sizing or lubricating
19 Dyeing and bleaching, desizing or degumming
20 Dyeing and renovating
21 Mixed textile materials
22 Vegetable and animal fiber containing
23 Reserving addition or pretreatment
24 Cellulose ester or ether containing
25 Several dyes
26 Azo containing
27 Azo and vat or sulfur
28 Several vat or sulfur
29 Mordant dyeing
30 Combined dye and mordant
31 Pre-mordanting

Dyeing processes and compositions

32 Oxidation dyes
33 Cellulose ester or ether materials
34 Vat or sulfur dyes
35 Soluble leuco ester salts
36 Animal fibers, or cellulose ester or ether materials
37 Sulfur dyes
38 Indigoid
39 Anthraquinone dyes, non-vatted
40 Cellulose ester or ether materials
41 Azo dyes
42 Metallic
43 Animal fibers
44 Stabilized or potential diazo compounds
45 Nitrosoamine or N-diazo
46 Developed on fibers
47 Animal fibers
48 Cellulose ester or ether materials
49 Insolubilized or oxidized on fibers
50 Cellulose ester or ether materials
51 Regenerated cellulose materials
52 Inorganic dyes
53 Natural dyes
54 Animal fibers
54.2 Cellulose fibers
55 Artificial fibers
56 Fugitive dyeing
57 Cellulose esters or ethers
58 Dispersing
59 Swelling or penetrating
60 Saponifying
61 Fastness improving

Dyeing processes and compositions

62 Textile printing only
63 Cellulose ester or ether materials
64 Resist, reserve or discharge style
65 Resist, reserve or discharge style
66 Chemically modified local areas
67 Oxidation dye ground
68 Azo dye component ground
69 Discharge
70 Vat or sulfur dyes
71 Azo components
72 Mordant and dye
73 After treatment of dyed materials
74 Fastness improving or fixing
75 Lake-forming metallic compounds
76 Miscellaneous dye compositions and methods of preparing same
77 Laundry bluing
78 Dye soaps
79 Dye forms (powders, pastes, tablets, etc.)
80 Extraction and purification
81 Dye recovery
82 With assistants, solvents, or dispersing agents
83 Organic
84 Onium compounds
85 Amino or amido compound
86 S(O)n or P (O)n derivative
87 Extra-cyclic carbonyl containing (including proteins)
88 Oxy or hydroxy containing

Dyeing processes and compositions

Miscellaneous dye compositions and methods of preparing same
With assistants, solvents, or dispersing agents
Organic
89 Sulfur or phosphorus acids or esters
90 Acyclic or alicyclic
91 Carbohydrates, their ethers or esters
92 COO-containing or their S analogues
93 Oxy or hydroxy compounds or their S analogues
94 Hydrocarbons or their non-functional derivatives
94.10 **Treatment of hides, skins, feathers, and animal tissues**
94.11 Internal tissues
94.12 Fish or reptile skins
94.13 Suede
94.14 Fur
94.15 Treatment of untanned skins or hides
94.16 Depilating
94.17 Alkaline material removal.
94.18 With organic material
94.19 Tanning
94.20 With subsequent treatment
94.21 Organic material
94.22 Fat, fatty oil, fatty oil acid or salt thereof
94.23 Emulsions
94.24 With aldehyde-aromatic condensation product
94.25 With heavy metal compound

Treatment of hides, skins, feathers, and animal tissues
Tanning
With heavy metal compound
94.26 With organic material
94.27 Chromium compound
94.28 Iron compound
94.29 With aluminum compound
94.30 With vegetable extract
94.31 With cellulose liberation liquor
94.32 With vegetable extract
94.33 With organic material
95 **Weighting or mordanting**
96 Preserving
97 Mordanting
98 Lake-forming metal and tannate
99 Lake-forming metal only
100 Non-metallic
101 **Bleaching**
102 Color stripping or subduing
103 Wave energy
104 Pulp
105 Chlorine
106 With sulfur compounds or peroxides or oxygen
107 Chemical
108 Chlorine
109 With sulfur compounds or peroxides or oxygen
110 Sulfur compounds
111 Peroxides or oxygen
112 **Improving felting properties (carrotting)**
114 **Ornamental effects**
114.5 Differential creping
114.6 With fiber destruction or removal
115 With local treatment
115.5 **Chemical modification of textiles and fibers**
115.6 With coating, sizing or lubricating
115.7 Mixed fibers
116 Cellulose fibers
116.2 Treatment with N-containing organic compound
116.3 With aldehyde or ketone
116.4 Treatment with aldehyde or ketone
117 Wool-like or crinkle effects
118 Transparent, parchmentized or linen finish
119 Paper
120 Esterifying, etherifying or immunizing
121 Acetylation
122 Xanthogenation
123 Cuprammonium treatment
125 Mercerizing or alkaline treatment
127 Wetting addition or pretreatment
127.5 Proteinaceous fibers
127.6 Treatment with aldehyde, ketone or N-containing organic compound
128 Natural wool or silk
129 Cellulose ester or ether fibers
130 Saponifying
130.1 **Swelling or plasticizing of artificial fibers**
131 Cellulose ester or ether fibers
132 With stretching
133 **Fiber protecting during fluid treatment**
134 **Color protecting during fluid treatment**
137 **Cleaning or laundering**
137.5 Removing formation impurities from artificial fiber
138 Degumming or desizing
139 Scouring, degreasing or bowking
139.1 With fat solvent
140 Carbonizing
141 Waste reclaiming and conditioning
142 Dry cleaning
147 **Fluid treatment (manipulative)**
148 Confined areas
149 Intermittent length
149.1 Combined liquid and gas or vapor
149.2 Gas or vapor
149.3 Including steam
150 Special forms and forming
150.5 Hides, skins or leather
151 Running lengths
151.1 Helical textile course
151.2 Yarns
152 Piling
154 Wound packages
155 Yarns
155.1 Radial liquid flow
155.2 Skeins, cakes or cheeses
156 Pulp or fibers (in bulk)
157 Kier treatment
158 Manipulation of liquid
159 Agitating immersed material and liquid

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9 BOATS AND BUOYS

1 **Boats**
3 Lifeboats
4 Inclosed
5 Hunting
2 Sectional and folding
6 Hull construction
6.5 Formers and framers
7 Seats and foot supports
8 **Buoys**
8.3 Illuminating
8.5 Oil distributors
9 Wreck indicating
10 Safes
11 **Life rafts**
12 Ship parts and furniture
13 Mattress
17 **Life preservers**
18 Mechanical propulsion
19 Self-inflating
20 Garment
14 **Life-saving apparatus**
21 **Swimming appliances**
15 **Rafting and booming**
16 Timber couplings
30 **Life craft handling**
31 Conveying from storage position to launching position
32 Automatic control
33 Launching upon sinking of ship
34 Davits
35 Movably mounted
36 Compound movement
37 Rocking
38 Translating and tilting
39 Pivoting about single axis
40 Vertical axis

9 BOATS AND BUOYS

Life craft handling
41 Chutes or tracks
42 Launching protectors
43 Connectors between boat and lowering tackle
44 Releasing mechanism, boat attached
45 Simultaneous, bow and stern
46 **Chocks and/or lashings**
24 **Oars**
25 Bow facing
26 **Rowlocks**

10 BOLT, NAIL, NUT, RIVET, AND SCREW MAKING

1 **Miscellaneous**
2 **Screw making**
3 Head nicking and shaving
4 Pointing and threading
5 Head nicking
6 Rotary work holder
7 Punch and die
8 Head shaving
9 Pointing
10 Processes
11 **Bolt and rivet making**
12 Multiple header

10 BOLT, NAIL, NUT, RIVET, AND SCREW MAKING—Continued.

Bolt and rivet making
13 Rotary multiple dies
15 Reciprocating die and header
16 Toggle-closing dies
17 Wedge-closing dies
18 Side swaging
14 Cotter-slot punching
19 Bolt-head finishing
20 Broaching
21 Bolt pointing
22 Anvils
23 Safety devices
24 Dies
25 Shears
26 Heading punches
27 Processes
Nail making
28 Cut nails
36 Horseshoe nails
37 Cutting and finishing
38 Finishing
39 Rotary work holder
40 Dies
41 Nail plates
42 Processes
29 Tack strips
30 Cutting and heading
31 Cutting and pointing
32 Cutting
35 Dies
33 Nail plates
34 Processes
43 Wire nails
44 Making and distributing
45 String nails
46 Spiral shank

10 BOLT, NAIL, NUT, RIVET, AND SCREW MAKING—Continued.

Nail making
Wire nails
47 Multiple header
48 Opposite
49 Reciprocating die and header
50 Toggle-closing dies
51 Wedge-closing dies
52 Rotary work holder
53 Dies
54 Processes
55 Wrought nails
56 Spikes
57 Reciprocating die and header
58 Roller die
59 Pointing
60 Rotary work holder
61 Dies
62 Blanks
63 Processes
64 Horseshoe nails
65 Chain feed
66 Roll forging
67 Traveling roll
68 Side swage
69 Rotary work holder
70 Dies
71 Processes
72 **Nut and washer making**
73 Lock-washer making
74 Coiling and forging
75 Nut finishing and tapping
76 Forging
77 Rotary multiple dies
78 Double-punch drive
79 Side swage
80 Side swage and mandrel

Nut and washer making
81 Nut broaching
82 Nut milling
83 Nut facing
84 Arbors
85 Dies
86 Processes
Screw threading
87 Machines, combined
88 Wooden screws
89 Machines
90 Cutting off and threading
91 Multiple die
92 Aligned
93 Turret
94 Collapsing die
95 Bevel closing
96 Cam closing
97 Lever closing
98 Cone
99 Toggle
100 Pivoted chaser carrier
101 Chasing cutter
102 Rotary
103 Recessed cylindrical die block
104 Screw chaser adjustment
105 Feeds
106 Lubricators
107 Work holders
Implements
109 Combined turning and threading
110 Dies, combined cutting off and threading
111 Dies
112 Pipe trimming
113 Thread trimming
114 Multiple
115 Rotatable die block
Screw threading
Implements
Dies
116 Divided
117 Coned screw adjustment
118 Integral
119 Adjustments
120 Radial chaser
120.5 Taper threading
121 Adjustable
122 Cam operated
123 Die stocks
124 Ratchet
125 Hinged
126 Oilers
127 Bushings
Tapping
128 Machines, combined reaming and tapping
129 Machines
130 Multiple tap spindle
131 T threading
132 Circular gang
133 Double tap grip
134 Releasable tap
135 Yielding tap driver
136 Reversing mechanisms
137 Bevel geared
138 Spur geared
139 Feeds
Implements
140 **Taps, combined**
141 Taps
142 Adjustable
143 Collapsible
144 Cam core
145 Wedge core
146 Built up
Screw threading
Tapping
Implements
Taps
147 Guides
148 Tap wrenches
149 Axial-screw clamp
150 Ratchet
151 Transverse-screw clamp
152 Swaging
153 Reciprocating die
154 Thread milling
155 **Bolt with nut and/or washer assembling or disassembling**
156 **Capping nails and screws**
157 Rectangular stock feed
158 Rotary work holder
159 Nicking devices
160 Dies
161 Processes
162 **Distributers and feeders**
163 Agitated chute
164 Agitated hopper
165 Inclined chute
166 Gripping feeding jaws
167 Reciprocating lifter
168 Rotary cylinder
169 Rotary disk
170 Rotary hopper
171 Mail plate
172 Oscillating
173 Reversing
174 Geared
175 Rack and pinion
176 Segmental
177 Strap drive
178 Nippers and nose pieces

1 **Miscellaneous**
2 **Cover making**
3 **Casing in**
4 **Pamphlet covering**
5 **Rounding and backing**

1 **Miscellaneous**
2 **Lasting and nailing machines**
3 Handguided driver
4 Multiple drivers
5 Pivoted jack
6 **Lasting and sewing machines**
7 **Lasting machines**
8 Girth stretcher
9 Nipper stretcher
10 Wiper folder
11 Multiple work supports
11.1 Nippers
12 Wiper stretcher
13 Pronged
14 End lasting
14.1 End clasps
15 Relasting
15.1 Delasting
16 Tack pullers
17 **Sole machines**
18 Channeling and trimming
19 Clamped work
19.1 Fastener inserting and trimming
19.2 Fastener inserting, laying and leveling
20 Insole reenforcing
21 Blank molding
22 Edge
23 Blank rounding
24 Strip feed
25 Clamped work
26 Rotary work and cutter
27 Channeling
28 Clamped work
29 Channel-flap layers
30 Channel-flap turners

Sole machines
31 Edge inking
31.5 Heel-seat forming
31.6 Spring heel
32 Imitation stitch
33 Laying and leveling
34 Roll
35 Oscillating jack and former
36 Multiple work supports
37 Revoluble
38 Dies and formers
39 Lining appliers
40 Slitting and grooving
41 Stitch-separating and indenting
41.1 Pliabilizing soles in a shoe
41.2 Pliabilizing soles
41.3 With fluid treatment
42 **Heel machines**
43 Breasting and nailing
44 Die cutting and nailing
45 Trimming and nailing
46 Bevel and seat cutting
47 Breasting
47.1 Rotary cutter
48 Molding
49 Beading
49.1 Covering
50 Assembling
50.5 Removers
51 **Upper machines**
52 Assembling
55 Folding
55.1 With slitting or notching
57 Turning
57.1 With seam pressing
57.2 Attached sole type

Upper machines
58 Skiving
59 Strap covering
59.5 Tape appliers
60 **Shank machines**
61 **Toe and heel stiffener machines**
62 Skiving
63 Recessed carrier
64 Molding
65 Roll
66 Separable matrix
67 **Welt and rand machines**
67.1 Welt and rand formers
67.2 Welt beaters
68 **Boot-treeing machines**
69 **Boot-tree holders**
69.3 **Buttoning machines**
69.5 **Lacing or unlacing machines**
70 **Burnishing machines**
71 Heel
72 Oscillating jack
73 Automatic transverse feed
74 Oscillating tool head
75 Automatic transverse feed
76 Shank and tread
77 Rotary tool
78 Vibrating tool
79 Hand guided
79.5 **Waxing and polishing**
79.6 **Shoe filling machines**
80 **Cement-applying devices**
82 **Inseam-trimming machines**
83 Horn-carried knife
83.5 **Vamp-trimming machines**
84 **Peg cutters**

85 **Sole and heel edge trimmers**
86 Clamped work
87 Rotary cutter
88 Rotary cutter
89 Multiple cutter head
90 Adjustable rand guide
91 Rotary cutter heads
92 Axially adjustable
93 Supplemental cutters
94 Inserted cutters
95 Angularly adjustable
96 **Upper creasing**
97 **Upper crimping and stretching**
98 Shank stretchers
99 Former and wiper
100 Belt-carried former
101 Pivoted former
102 Formers and clamps
103 **Tools**
104 **Burnishing tools**
105 Rotary
107 **Lasting tools**
108 Nailing and stretching
109 Stretchers and hammers
110 Stretchers
111 Multiple grip
112 Toe
113 Fly closers
116 **Boot trees**
117 Plunger expanded
118 Footlocks
119 Foot pieces
120 Clasps
122 **Shoemakers' benches**
123 **Work supports**
124 Expansible holder

Work supports
125 Heel clamping
126 Last jacks
127 Saddle and spindle
81 **Felt-boot formers**
128 **Formers**
128.1 Expanding, variable amount
128.2 Lateral and longitudinal
128.3 Positive and lock
128.4 Lateral
128.5 Positive and lock
128.6 Positive and lock
129 Pneumatic
129.1 Sole straighteners
129.2 Spot stretchers
129.3 Top stretchers
129.4 Heated
133 **Lasts**
134 Adjustable
135 Separate heel block
136 Hinged
137 Instep-block fasteners
138 Sliding bolt
139 Heel plates and sockets
140 Peg receivers
141 Shoe retainers
142 **Processes**
145 Lasting
146 Miscellaneous parts
147 Heel
148 Filling shoes

13 ELECTRIC FURNACES

1 **Miscellaneous**
2 **Combination**
3 Arc and resistance
4 Arc and induction
5 Induction and resistance
6 **Glass furnaces**
7 **Carbon treating**
8 **With condensers**
9 **Arc furnaces**
10 Tilting and/or rotating
11 Deflected arc
12 Control systems
13 Automatic arc adjustment
14 Electrode holders and adjustment
15 Holders
16 Clamp
17 Guides
18 Electrodes
20 **Resistance furnaces**
21 Rotating
22 Resistance in wall
23 Open circuit or charge as resistor
24 Control systems
25 Resistance elements and mountings
26 **Induction furnaces**
27 Pool surrounded by coil
28 Pool surrounding the coil
29 Submerged channel
30 Channel linings
31 **Pressure and vacuum**
32 **Wall cooled furnaces**
33 **Charging or discharging devices**
Processes
34 Furnace manipulation
35 **Linings**

14 BRIDGES

1 **Miscellaneous**
Combination
2 Truss and arch
3 **Truss**
4 Arrangement
5 Adjustable
6 Deck
7 Cantilever
8 Suspension
9 Bowstring
10 Adjustable
11 Intermediate catenary
12 Both chords curved
13 Structure
Details
14 Connections
15 End shoes
16 Expansion devices
17 **Girder**
18 **Suspension**
19 Compound system
20 Simple system
21 Towers and anchors
22 Cables and cable clamps
23 Constructive apparatus
24 **Arch**
25 Compound
26 Abutments and anchorages
27 **Floating**
28 Adjustable height
29 Draw
30 Locking
31 **Draw**
32 Swing
33 Hand or motor operated
34 Boat operated

Draw
Swing
35 End supports and locking devices
Bascule
36 Fixed pivot
37 Hinged sections
38 Rack and pinion
39 Nonpivoted
40 Rack and pinion
41 Locking devices
42 Lift
43 Horizontally sliding
44 Boat operated
45 Lazy tongs
46 Locking devices
47 Aprons
48 Buffers
49 Signals
50 Gates
Hand or motor operated
51 Horizontally swinging
52 Vertically sliding
53 Vertically swinging
Bridge operated
Displacement
54 Horizontally sliding
Locking
55 Horizontally swinging
57 Locking
58 Vertically sliding
59 Locking
60 Vertically swinging
61 Locking
Shaft rotation
62 Horizontally sliding
63 Locking

Draw
Gates
Bridge operated
Shaft rotation
64 Horizontally swinging
65 Locking
66 Vertically sliding
67 Locking
68 Vertically swinging
69 Locking
Gangways
70 Endless conveyer
71 One end attached
72 Unattached
73 **Floors**
74 **Coverings**
75 **Piers**
76 Fenders
77 Processes

15 BRUSHING, SCRUBBING, AND GENERAL CLEANING

1 **Miscellaneous**
2 **Cleaning plants**
3 **Machines**
3.10 For fruit, vegetables, meat or eggs
3.11 With assorting or screening
3.12 Fluid application and/or work heating (e. g., drying)
3.13 Work moved through apparatus
3.14 Liquid application only
3.15 Work treating element and/or work immersed
3.16 Work moved through apparatus
3.17 Transverse axis work treating elements
3.18 Longitudinally movable elements
3.19 Fixed axis rotary work treating conveyor
3.20 Axial work feed
3.21 Work conveyor mounted work treating elements
4 Combined
5 Beater and brush
6 Air blast or suction
7 Brush and air blast or suction
8 Carpet sweepers
9 Convertible
10 Nonrotary
11 Street sweepers
12 Beater and air blast or suction
13 Portables
14 Air blast and suction
15 Suction
16 Floor and wall cleaners
17 Hand pump

Machines
Suction
Floor and wall cleaners
18 Traction pump
19 Street cleaners
20 Air blast
21 Brushing
22 Handle mount
23 Rotary cylinder
24 Fountain
25 Manual motor
26 Alternating
27 Traction operated
28 Rotary disk
29 Fountain
30 Boot cleaning, blacking, and polishing
31 Polish supplying
32 Rotary reciprocating brush
33 Reciprocating brush
34 Rotary brush
35 Planetary
36 Boot cleaners and polishers
37 Reciprocating brush
38 Brush cleaners
39 Comb cleaners
40 Flexible-fabric cleaners
41 Carpet sweepers
42 Auxiliary brush
43 Combined fan and brush
44 Dust laying
45 Fenders
46 Manual motor
47 Nonrotary
48 With brush cleaner

Machines
Brushing
49 Floor and wall cleaners
50 Scrubbers
51 Endless wiper
52 Rotary wiper
53 Railway-car cleaners
54 Rail sweepers
55 Rotary brush
56 Receptacle cleaners
57 Barrel
58 Single stage
59 Bottle
60 Endless carrier
61 Tank
62 Reciprocating bottle rack
63 Rotary carrier
64 Tank
65 Single bottle
66 Bottle guide
67 Neck cleaners
68 Reciprocating brush
69 Water motor
70 Can
71 Inside brush
72 Collapsible
73 Cuspidor
74 Dish
75 Tumbler
76 Immersion
77 Sheet, bar, and plate cleaners
78 Street sweepers
79 Hand
80 Belt brush
81 Reciprocating brush

Machines
Brushing
Street sweepers
82 Rotary-brush cylinder
83 Collector
84 Elevator belt
85 Elevator pan
86 Elevator wheel
87 Rotary-brush disk
88 Wire, rod, and tube cleaners
89 Beating
90 Rotary drum
91 Stationary work
92 Portables
93 Scraping
94 Shaking
95 Shotting
96 Shakers
97 Wiping
98 Floor and wall cleaner
99 Endless belt
100 Photographic-film cleaners
101 Receptacle cleaners
102 Sheet, bar, and plate cleaners
103 Window cleaners
104 **Implements**
104.01 Cylinder, piston, and plug cleaners
104.02 Reamers
104.03 Pipe and tube cleaners
104.04 Outside
104.045 Fluid blast
104.05 Inside
104.055 Fluid blast
104.06 Current operated
104.07 Hammer

Implements
Pipe and tube cleaners
Inside
104.08 Tube deformer
104.09 Rotary tool
104.10 Outside power
104.11 Inside boiler drum
104.12 Contiguous fluid motor
104.13 Plural rotary cutter
104.14 Centrifugally pivoted
Reciprocating tool
104.15 Plural rotary cutter
104.16 Scraper, cutter, wiper or brush
104.165 Non-piercing fabric holder
104.17 Expanding at both ends
104.18 Expanding at one end
104.19 Expanding between ends
104.20 Radial bristle
104.30 Sewer
105 Combined
106 Brush
107 Dauber and polisher
108 With polish holder
110 Brush and massage-tool
111 Brush and scraper
112 Boot cleaners
113 Hand
114 Brush and wiper
115 Mop
116 Mop and wringer
117 Brush and squeegee
118 Wiper
119 Mop and wringer
120 Twisters
121 Squeegee

Implements
Combined
121.1 With applicator cleaner
121.2 With material supply chamber and receiving element
121.3 Single chamber only
122 With soap-supply
123 Fountain
124 Reservoir carrying
125 Shoe polishers
126 Window cleaners
127 Fountain, pressure supply
128 Brush or wiper
129 Soap chamber
130 Sponge
130.1 With material supply
130.5 Barometric type
131 Implement carried
131.1 Fluent solid applying (includes powder puffs)
132 Dust laying
133 Reservoir as handle
134 Absorbent and cap
135 Collapsible reservoir
136 Resilient
137 Follower
138 Hand-feed valve
139 Work-operated valve
140 Striping
140.1 Striping
140.2 Single chamber only
140.3 Applicator carried by closure
140.4 Brush
141 Beaters
142 Grids and combs

Implements
143 Handles
144 Adjustable
145 Detachable
146 Holders, brush and broom
147 Holders, mop
148 Convertible
149 Expansible
150 Pivoted jaw
151 Sliding jaw
152 Lever operated
153 Screw operated
154 Spring wire and runner
155 Nozzles, heads, and shoes
156 Joints and couplings
157 Scrapers, guards, and pick-ups
158 With brush
159 Brushes and brooms
160 Special work
161 Boot cleaners
162 Flue cleaners
163 Suspension
164 Hollow-ware cleaners
165 Collapsible
166 Striping
167 Tooth and nail brushes
168 Bridles
169 Adjustable
170 Straw supported
171 Heads and casings
172 Adjustable head
173 Axial clamp
174 Bands
175 Braces, caps, and shields
176 Detachable head
177 Lateral clamp

Implements
Brushes and brooms
Heads and casings
Lateral clamp
178 Pivoted jaw
179 Rotary
180 Disk
181 Laminated
182 Spiral bristle mount
183 Tuft-holding bar
184 Housings
185 Pivoted
186 Individual-bristle mount
187 Integral
188 Rubber
189 Stitched and wire bound
190 Tuft fasteners
191 Tuft socket
192 Cemented
193 Plastic mass
194 Detachable tuft
195 Folded tuft
196 Drawn work
197 Metal bristle
198 Rotary
199 Retaining wire
200 Metal bristle
201 Movable tuft section
202 Detachable
203 Folding
204 With core
205 Folded tuft
206 Twisted bristle holder
207 Wire wound

Implements
208 Fabric
209 Wipers, daubers, and polishers
210 Special work
211 Hollow-ware cleaners
212 Expansible
213 Rotary
214 Lens cleaners
215 Mats
216 Combined
217 Tuft carrying
218 Razor cleaners
219 Wall-paper cleaners
220 Window cleaners
221 Collection chamber
222 End grip
223 Work face with exposed laminae
224 Channeled
225 Coil
Laminated
226 Strands
227 Mitts, cots, and shoes
228 Mops and heads
229 Strands
230 Rotary
231 Sheet holders
232 Window cleaners
233 Tension frame
234 Feather
235 Pelts
236 Scrapers
237 Boot cleaners
238 Mats
239 Pivoted link
240 Filler block
241 Wire
242 Flue cleaners
243 Suspension

Implements
244 Sponges and holders
245 Squeegee
246 **Attachments**
247 Covers and cover holders
248 Drip cups and shields
249 Flue cleaners
250 Window cleaners
250.3 With material applying means
250.4 Supply removed from cleaning implement
250.5 With heating means
251 Reciprocating cleaner
252 Opposed
253 Power operated
254 Rotary
255 Swinging
256 Opposed
256.5 Moving surface scraper, wiper, or brush
256.6 Strand
257 **Accessories**
258 Blacking box and brush cases
259 Blacking-box holders
260 Mop wringers
261 Presser boards
262 Roller
263 Twisters
264 Scrubbing pails
265 Shoe-blacking stands
266 Polisher guides
267 Shoe clamps
268 **Work supports**

16 MISCELLANEOUS HARDWARE

1 **Miscellaneous**
2 **Bushings or lining thimbles**
3 Wooden receptacle
4 **Carpet fasteners**
5 Combined fasteners and stretchers
6 Hook
7 Moldings
8 Rug
9 Sliding
10 Stair
11 Risers
12 Rods
13 Catches
14 Sliding
15 Swinging
16 Strips
17 Swinging
18 **Casters**
19 Adjustable
20 Antifrictionally swiveled
21 Ball
22 Cylinder
23 Pivoted
24 Ball
25 Antifrictionally mounted
26 Ball
27 Cylinder
28 Pivoted
29 Bracket supports
30 Detachable
31 Frame
32 Leg elevators
33 Sliding
34 Swinging
35 Locked
36 Lubricators
37 Pintles
38 Pintle retainers
39 Frame

Casters
40 Rigid wheel supports
41 Scrapers
42 Sliding
43 Sockets
44 Spring supported
45 Wheels
46 Antifrictionally mounted
47 Multiple
48 Antifrictionally swiveled
49 **Checks and closers**
50 Hinge
51 Liquid
52 Concentric spring chamber
53 Cam
54 Hinge
55 Pivot
56 Multiple piston
57 Oscillating cylinder
58 Oscillating piston
59 Side spring chamber
60 Cam
61 Spring and flexible link
62 Spring and gear
63 Spring and flexible link
64 Spring and gear
65 Spring and lever
66 Pneumatic
67 Flexible link
68 Hinge
69 Spring and gear
70 Spring and lever
71 **Closers**
72 Spring
73 Bow
74 Rubber
75 Torsional
76 Coil
77 Volute

Closers
78 Spring and flexible link
79 Spring and gear
80 Spring and lever
81 Weight
82 **Closure checks**
83 Inertia
84 Pneumatic
85 Spring
86 Rubber
86.1 **Gate hangers**
86.2 Sliding and swinging
87 **Panel hangers, travelers and/or tracks**
87.2 With flexible panel attaching means
87.4 Covered, hollow or slotted track
87.6 With antifriction means
87.8 With antifriction means
88 Ball
89 Cylinder
90 Guide brackets
91 Guide rollers
92 Link and lever
93 Sliding shoe
94 Track and bracket
95 Covered, hollow or slotted track
96 Tracks
97 Wheel mounts
98 Antifrictionally mounted wheels
99 Door elevating
100 Floor
101 Reciprocating track
102 Traveling wheel
103 Swinging
104 Swiveling
105 Vertically adjustable
106 Wheel and guide roller
107 Wheels
108 **Ferrules, rings, and thimbles**
109 Ring ferrules

110 **Handles**
110.5 Receptacle
111 Bar
112 Swinging
113 Braces
114 Detachable
115 Extensible
116 Insulated
117 Handwheels
118 Knob
119 Loop
120 Wire
121 Knob
122 Flexible suspending means
123 Swinging
124 Lifts
125 Loop
126 Swinging
127 Ring
128 **Hinges**
128.1 Automobile hood
129 Adjustable
130 Longitudinal
131 Transverse
132 Vertical
133 Leaf
134 Pintle
135 Angular leaf arm
136 Antifriction
137 Attachments
138 Brace
139 Catches
140 Friction
141 Sliding
142 Spring arm
143 Rigid
144 Sliding
145 Spring arm
146 Swinging

Hinges
147 Combined latch
148 Cover plate
149 Detachable leaf
150 Flexible leaf
151 Floor
152 Gravitating
153 Cam
154 Cam and roller
155 Lift rod
156 Multiple pintle
157 Laminated
158 Leaf clamp
159 Leaf prongs
160 Lifters
161 Lubricating
162 Multiple leaves
163 Multiple pintle
164 Concealed
165 Flush
166 Pin and slot
167 Multiple-wing leaf
168 Pintles
169 Retainer
170 Reversible
171 Separable
172 Hook
173 Multiple pintle
174 Rigid catch
175 Sliding catch
176 Sliding pintle
177 Swinging catch
178 Sliding segment
179 Sliding and swinging
180 Spring
181 Detachable leaf
182 Double acting
183 Multiple pintle
184 Flat

Hinges
Spring
185 Floor
186 Gravitating
187 Leaf clamp
188 Multiple coil
189 Pintle coil
190 Right angle
191 Stop
192 Wire
193 **Sash balances**
194 Cord and counterweight
195 Rack and pinion
196 Sash and cord
197 Spring
198 Drum and cord
199 Friction roller
200 Lever
201 Rack and pinion
202 **Sash-cord fasteners**
203 Bendable
204 Chain
205 Clamps
206 Hooks
207 Knot
208 Slack-cord holders
209 Weight
210 **Sash-cord guides**
211 Casings
212 Sheet metal, single piece
213 Multiple wheel
214 Sliding
215 Wheel and casing
216 **Sash weights**
217 Composite
218 Sectional
219 Weight and wheel
220 **Window-bead fasteners**

1 **Miscellaneous**
2 **Fish**
3 Dressers
4 Cutters
5 Scaling machines
6 Washers
7 Tools
8 Clamps
9 **Oyster openers**
10 Tools
11 **Fowl**
11.1 Plucking
11.2 Scalding tanks
11.3 Sinew removing
12 Beheaders
13 **Hog scalders and scrapers**
14 Suspended hog
15 **Hog scalders**
16 **Hog scrapers**
17 Suspended hog
18 Rotary scraper structure
19 Tools
20 **Hog singers**
21 **Skinners**
23 **Carcass splitters**
24 **Elevators and conveyers**
25 **Meat tenderers**
26 Coacting rolls
27 Roll and plate
28 Coacting toothed plates
29 Hand roll
30 Hand pounders
31 With chopper
32 **Meat briquetters**
33 **Sausage stuffers and linkers**
34 **Sausage linkers**
35 **Sausage stuffers**
36 Oscillating piston
37 Rotary piston

Sausage stuffers
38 Reciprocating piston
39 Fluid motor
40 Screw
41 Nozzles
42 Inserters for
42.1 **Larding pins**
43 **Intestine cleaners**
44 **Supports and shackles**
44.1 Fowl
44.2 Hangers
44.3 Clamp or prongs
44.4 Smoke sticks
45 **Processes**

17 BUTCHERING—Continued.

Sausage stuffers
38 Reciprocating piston
39 Fluid motor,
40 Screw,
41 Nozzles
42 Inserters for.
42.1 **Larding pins.**
43 **Intestine cleaners.**
44 **Supports and shackles**
44.1 Fowl,
44.2 Hangers
44.3 Clamp or prongs,
44.4 Smoke sticks.
45 **Processes.**

18 PLASTICS.

1 **Miscellaneous.**
2 **Vulcanizable gums, apparatus.**
3 **Pyroxylin, apparatus.**
3.5 **Puttying devices.**
4 **Molding plants.**
5 **Molding devices.**
5.3 Sound record
5.5 Casting or dipping,
5.6 Fluid pressure.
5.7 Dental,
6 Heating and vulcanizing
7 Pots,
8 Filament forming,
9 Rolling
10 Sheets,
11 Compound,
12 Die expressing
13 Compound,
14 Tube and hollow,
15 Film spreading,
24 Dipping
25 Capsule machines,
26 Casting
27 Candles,
28 Crayons,
29 Rollers,
16 Presses
17 Heating and vulcanizing
18 Tire repairing,
19 Sheet shaping,
20 Rotary mold support
21 Peripheral,
22 Reciprocating mold,
23 Stationary mold,
30 Chargers,
31 Mold wiping and coating,
32 Flasks and clamps
33 Dental,

18. PLASTICS—Continued.

Molding devices
34 Molds
34.1 Dental.
35 Sheet shaping,
36 Blank covering and filling
37 Lacing hooks and studs,
38 Heating and vulcanizing,
39 Casting
40 Soap,
41 Dipping,
42 Two and three part,
43 Clamping,
44 Dies and matrices,
45 Cores
46 Boot trees and lasts,
47 Materials.

Processes
47.5 Combined,
48 Miscellaneous,
48.3 Sound record
48.4 Facing or uniting,
48.5 Casting or dipping,
48.6 Fluid pressure,
48.8 Imitating marble,
51 Pyroxylin,
53 With vulcanization,
54 Filament forming,
55 Molding
55.1 Dental.
56 Sheets,
57 Film spreading,
58 Casting and dipping,
59 Uniting,
60 Facing type
61 Design.

19 TEXTILES, FIBER PREPARATION.

1 **Liberating**
2 Animal fibers
3 Silk,
4 Feathers,
5 Decorticating
6 With seed or leaf removing,
7 With liquid treatment
8 Depulping,
9 With air blast,
10 Individual-stalk opening,
11 Traveling clamp feed
12 Transverse
13 Overhead
14 Depulping,
15 Depulping
16 Single rotor,
17 Depulping
18 Including rotary,
19 Apron machines
20 Depulping,
21 Combinations with reciprocating brakes,
22 Reciprocating brakes
23 Continuous feed,
24 Rotary machines
25 Axially-movable rotor,
26 Single rotor
27 Depulping,
28 Depulping,
29 Including brakes and combs,
30 Brakes and beaters,
31 Brakes
32 Reverse rotation,
33 Beaters,
34 Depulping,
35 Boll hulling
36 With knocker roll and breaker,

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19. TEXTILES, FIBER PREPARATION—Continued.

Liberating
Boll hulling
37 With knocker roll,
38 With breaker,
39 Ginning
40 Delinting
41 Delinters
42 Separate delinting and doffing chambers
43 Roller and bar,
44 Rotor in shell
45 Vertical
46 Skeleton rotor,
47 Skeleton rotor,
48 Gins
49 Rolling squeeze,
50 Roller and bar
51 Laterally movable detacher,
52 Vibratory detacher,
53 Rotary detacher
54 Rollers,
55 Saw
56 With boll hullers,
57 Multiple cylinders,
58 Doffing and moting
59 Pneumatic doffing,
60 Brushes,
61 Seed boards,
62 Ribs,
63 Saws,
64 Saw cleaners,
65 Working
66 Fluid or special treatment,
67 Feeding and cleaning
68 Material regulated
69 By delivered bulk,
70 By thickness in transit
71 Trumpet type,

19. TEXTILES, FIBER PREPARATION—Continued.

Working
Feeding and cleaning
72 Pneumatic
73 With distributor
74 Mechanical,
75 Air separators
76 With dirt pocket,
77 Dirt pockets,
78 Apron
79 Lifting with surplus stripper,
80 Picking
81 Nonrotary,
82 Disintegrators
83 Gripping feed,
84 Bur removers, gripping feed,
85 Beaters
86 Gripping feed
87 Multiple rotor
88 With condenser,
89 With condenser,
90 Longitudinal feed
91 Multiple rotor,
92 Intermittent feed,
93 Multiple rotor,
94 Rotors
95 Screens,
96 Gripping feed,
97 Rotors,
98 Carding
99 Card types
100 Roller worker and stripper
101 Multiple-roller worker unit,
102 Traveling flat
103 Bends,
104 Stationary flat,
105 Feeding,
106 Doffing,
107 Waste recovering,

19. TEXTILES, FIBER PREPARATION—Continued.

Working
Carding
108 Stripping
109 Pneumatic,
110 Flat
111 Traveling,
112 Cylinders,
113 Flats,
114 Card clothing,
115 Combing
116 Tuft
117 Rotating tuft carrier,
118 Segment detacher
119 Fixed-position nipper and detacher,
120 Fixed-position detacher,
121 Bodily movable detacher,
122 Circle
123 Exterior and interior,
124 Dabbing mechanism,
125 Overhead traveling clamp,
126 Apron and cylinder,
127 Apron,
128 Cylinder,
129 Screw gill bar,
130 Drawing
131 Apron,
132 Conventional cotton type
133 Strand traverse,
134 Roll stands,
135 Pressure devices
136 Stirrup and lever,
137 Saddles
138 Lubricating,
139 Roll clearers
140 Rotary,

19. TEXTILES, FIBER PREPARATION—Continued.

Working
Drawing
141 Rolls
142 Top
143 Surface structure.
144 Assembling
145 Different materials
146 Uniform mixtures,
147 Cloth base,
148 Article, screen condensing,
149 Article, winding,
150 Sliver forming
151 Fleece dividers,
152 Rub rolls,
153 Rub aprons,
154 Twisting heads,
155 Web forming
156 Screen condensers,
157 Formed slivers
158 Winding,
159 Coiling,
160 Zigzag,
161 Formed webs
162 Winding,
163 Zigzag.
164 Stopping
165 Electrical,
166 Sliver
167 Roller
168 Trumpet,
169 Break detector

20 WOODEN BUILDINGS

0.5 **Miscellaneous**
1 **Buildings**
1.11 Apartments,
1.12 Auditoriums
1.123 Theater stages,
1.13 Storage,
1.2 Bins
1.4 Silos
1.41 Combined extension and roof
1.42 Chute,
2 Portable houses
3 Voting booths,
3.5 Telephone booths,
1.1 Plans,
1.6 Stores
1.7 Self-service.
99 **Poles and posts**
100 Protected
10 **Stairs.**
79 **Stair covers.**
4 **Wall construction.**
5 **Weather boarding.**
Floors
6 Miscellaneous,
7 Composite,
8 Interlocking,
9 Joist bridging.
78 **Slatted floor covering**
78.3 Flexibly interconnected elements
78.6 Side-by-side flexibly interconnected
Doors
16 Miscellaneous

20. WOODEN BUILDINGS—Continued.

Doors
Car
21 Miscellaneous,
Grain
27 Miscellaneous,
34 Vertical slide and swing,
28 Horizontal swing,
29 Pivoted side tilt,
30 Removable
31 Side slide,
32 Vertical slide
33 Pivoted guide,
Sliding
22 Miscellaneous,
23 Lateral movement
24 Link support,
25 Guide closures,
26 Cleats,
37 Door construction,
39 Wickets,
18 Rotating,
19 Miscellaneous,
35 Door construction
36 Removal panel,
38 Braces.

Windows
40 Miscellaneous,
40.4 Show-window type,
55 Storm,
40.5 Condensation preventing,
Sliding and swinging sash
42 Miscellaneous,
43 Cord-fastener pivot,

20. WOODEN BUILDINGS—Continued.

Windows
Sliding and swinging sash
44 Guide-rod pivot,
Horizontally pivoted frame
45 Sliding sash,
Separable hinge
46 Side swing
47 Vertical swing
Sliding frame
48 Vertically pivoted sash.
Sliding stile
49 Horizontally pivoted sash,
50 Vertically pivoted sash,
Vertically pivoted frame
51 Sliding sash
52 Sliding sash
52.1 Pocketed
52.2 Removable
52.3 Supplemented stile,
52.4 Joint closures
52.5 Positive
52.6 Wedge,
53 Swinging sash,
Sashes
54 Cushioned,
56 Sash construction
56.1 Removable panel,
56.2 Sliding pane,
56.3 Corner posts and mullions,
56.4 Pane fasteners,
56.5 Parallel panes.
57 **Window cranes**

20. WOODEN BUILDINGS—Continued.

57.5 **Awnings**
Shutters
58 Miscellaneous,
61 Sliding,
60 Registering slide,
Slats
62 Pivoted,
63 Fixed.
11 **Door and window frames**
12 Movable jambs.
64 **Thresholds.**
70 **Door and window troughs.**
71 **Door and window guards**
72 Body attached
Weather strips
65 Hinged
66 Sills,
67 Spring,
68 Sliding,
69 Packing.
73 **Mantels.**
97 **Wooden columns**
98 Caps and bases,
15 **Panels and wainscoting.**
76 **Corner shields.**
77 **Ceiling centerpieces.**
74 **Moldings.**
94 **Joist connections.**
95 **Framing sockets.**
75 **Mosaics and inlaying.**
93 **Nail-hole plugs.**
91 **Compound lumber.**
89 **Veneering.**
92 **Splices and joints.**

21 PRESERVING, DISINFECTING, AND STERILIZING

2 Methods
2.5 Metal (including anti-tarnish fabrics),
7 Wood treatment,
53 Air,
54 Electrical,
55 Deodorizing,
56 With steam
57 Added chemicals,
58 With chemicals
59 Cyanides,
60 Sudden release of pressure,
60.5 With protective layers.
61 Apparatus
62 Wood treatment
63 Impregnation
64 Combined with seasoning or drying,
65 Closed chamber
66 With steaming means,
67 Pivotally mounted,
68 End impregnation,
69 Open vat
70 Endless conveyor,
71 Caps
72 Closed chamber,
73 Injectors,
74 Air
75 Mausoleums,

21. PRESERVING, DISINFECTING, AND STERILIZING—Continued.

Apparatus
76 Books and papers,
77 Intermittent discharge,
78 Containers
79 Inverted,
80 Endless conveyor,
81 Towels,
82 Instrument
83 Cabinets and receptacles
84 Kits,
85 Heated
86 Liquid immersion,
87 Liquid immersion,
88 Single instrument cases
89 Heated,
90 Immersion,
91 Sterilizers
92 Heated
93 Closed chamber
94 Steam
95 Top opening,
96 Side opening,
97 Cylindrical or spherical casing
98 Horizontally mounted,
99 Immersion
100 Closure operated tray,
102 Electrical energy,

21. PRESERVING, DISINFECTING, AND STERILIZING—Continued.

Apparatus
103 Elements and attachments
104 Valves,
105 Racks and supports,
106 Preparation of disinfecting material
107 Liquid current,
108 Fumigators (fume generators)
109 With material chamber
110 Heater,
111 Burners
112 Forced draft
113 Pump
114 Bellows and bulb,
115 Rotary,
116 Incense,
117 Heaters and vaporizers
118 With steaming means,
119 Electric
120 Light attachment,
121 Gaseous current
122 Air
123 With pump
124 Bellows or bulb,
125 Rotary,
126 Electric fan,
127 Suction cleaner attachment.

22 METAL FOUNDING.

1 **Miscellaneous.**
2 **Stereotype-casting apparatus**
3 Combined machines,
4 Heating or cooling mold,
5 Molds,
5.5 Matrices.
9 **Molding apparatus**
10 Core making
11 Die expressing,
12 Rotating core bar,
13 Core boxes,
14 Screw threads,
15 Curved molds,
16 Pipes vertical
17 Compacting pattern
18 Rotating
19 Bead forming,
20 Plants,
21 Rotating table,
22 Rolling pattern,
23 Segmental pattern,
24 Sweeping or cutting,
25 Packing and drawing
26 Mold moving against press head,
27 Parting surface compression
28 Stripping,
29 Jarring mold and stripping,
30 Pressing and vibrating pattern,
31 Assembling mold parts,
32 Inverting flask
33 Rock over,
34 Removing mold,
35 Charging flask
36 Under pressure,
37 Core setting,
38 Sprue molding,
39 Venting,
40 Packing sand
41 Multiple rammer,

Molding apparatus
Packing sand
42 Presses
43 Swinging press head
44 Reciprocating mold,
45 Jarring
46 Press heads and plungers,
47 Drawing pattern
48 Mold lifting
49 Reciprocating pattern,
50 Stripping
51 Compound stripping plate,
52 Parallel motion,
53 Curvilinear draw,
54 Stool,
55 Lever and link,
56 Vibrating.
57 **Casting apparatus**
57.1 Dental,
57.2 Continuous casting
57.3 Traveling mold
57.4 Endless band,
57.5 Cooperating rolls.
58 Composite castings and joints
59 Fence and net leading,
60 Ingots,
61 Pigs and ingots
62 Endless chain,
63 Rotating table,
64 Plants,
65 Centrifugal
65.1 Dental,
67 Compression
68 Charging under pressure
69 Pneumatic
69.1 Dental,
70 Melting pot and pump
71 Heated,
72 Pneumatic,

Casting apparatus
73 Vacuum,
74 Mold heaters,
75 Moving mold
76 Endless chain,
77 Rotating table,
78 Reciprocating,
79 Metal holding and pouring
80 Pot charging,
81 Ladles
82 Carriers and manipulators,
83 Skimming,
84 Bottom pour
85 Internal stopper,
86 Hand.
87 **Mold and core drying apparatus.**
88 **Mold coating and lining apparatus.**
89 **Mold-material-treating apparatus.**
90 **Mold and flask supports**
91 Tilting.
92 **Mold-separating devices**
93 Drawing core.
94 **Casting ejectors**
95 Ingot strippers.
96 **Flasks**
97 Dental,
98 Vertical pipe,
99 Multipart,
100 Extensible,
101 Pattern, core, or insert holding
102 Sash weight,
103 Chill holding
104 Wheel,
105 Swinging cope.
106 Separable sides or ends
107 Snap flasks,
108 Gate extension,
109 Clamping,
110 Guides,
111 Sand-retaining devices.

112 **Mold jackets and weights.**
113 **Molds**
113.1 Dental,
114 Finger ring,
115 Split castings,
116 Composite castings and joints
117 Pipe joints
118 External bands,
119 Expanding clamps,
120 Wheels,
121 Ingots,
122 Nonmetallic inserts,
123 Lining articles,
124 Sand molds
125 Insert clamps,
126 Sand and metal
127 Circular chills
128 Wheel,
129 Sand
130 Multiple.
131 With cores
132 Circumferential,
133 Vertical,
134 Sprue, gate, runner, and riser,
135 Vents,
136 Metal
137 Chains,
138 Wheels,
139 Ingots and pigs
140 Hollow,
141 Bottom pour,
142 Multiple,
143 Horizontal,
144 Double walled,
145 Separable sides
146 Clamped,
147 Sink heads and feeders,
148 Stoppers,
149 Multiple,

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22. METAL FOUNDING—Continued.

Molds

Metal

150 Sprue separating,

151 Separable cores

152 Single,

153 Two part,

154 Ejecting,

155 Runner,

156 Clamping.

157 **Pattern and match plates.**

158 **Patterns**

159 Pipe,

160 Insert, core, or chill supporting,

161 Core forming,

162 Sprue, gate, and runner,

163 Undercutting,

163.5 Coatings,

164 Composition and composite.

165 **Cores**

166 Pipe,

167 Chill or insert holding,

168 Metal

169 S-trap,

170 Contracting,

171 Vents,

172 Core bars

173 Collapsible.

174 **Chills**

175 Plow

176 Vents,

177 Heated or cooled,

178 Circular

179 Gear teeth,

180 Rolls,

181 Nonchilling rings,

182 Contracting,

183 Vents.

184 **Core chaplets and supports.**

22. METAL FOUNDING—Continued.

185 **Molding tools**

186 Pattern lifters and draw plates,

187 Rammers.

188 **Mold and core materials**

189 Coatings and linings.

190 **Processes**

190.1 Dental.

191 Pattern-plate and match making.

192 Treating mold,

193 Molding

194 Core making,

195 Pattern making,

196 Destroying pattern,

197 Green sand

198 Mold and core,

199 Drawing pattern,

200 Casting

200.1 Continuous

201 Composite article

202 Partly nonmetallic,

203 One metal solid

204 Heated

205 By original heat of casting,

206 Iron and steel

207 Compression,

209 Introducing metal

210 By immersion,

211 Annealing in mold,

212 Cooling

213 Chilling iron,

214 Treating with gases,

215 Treating with solids,

216 Preventing piping by manipulation,

217 Preparation of mold materials.

218 **Ingots**

219 Composite.

23 CHEMISTRY.

1 **Miscellaneous.**
2 **Gas separation and purification**
3 Heating and illuminating gas,
4 Air.
14 **Compounds**
15 Rare element compound recovery
16 Dry
17 Distillation,
18 Wet
19 Acidic,
20 Treatment
21 Dry,
22 Wet
23 Acidic,
24 Basic,
25 Alkali-metal compound recovery
26 From refractory minerals
27 Dry
28 Distillation,
29 Acidic,
30 Basic,
31 Wet
32 Acidic,
33 Basic,
34 From fume
35 Gas treatment,
36 Dust treatment,
37 From natural salt deposits
38 Wet
39 Acidic,
40 Basic,
42 Common salt.
46 From carbonaceous matter
47 From aquatic plants,
48 By incineration,
49 By wet processes,

23. CHEMISTRY—Continued.

Compounds
50 Salts
51 Amphoteric metals
52 Aluminum,
53 Arsenic, antimony, or tin
54 Of lead,
55 Copper or zinc,
56 Chromium
57 Of lead,
58 Manganese,
59 Boron
60 Perborates,
61 Carbonates
62 Percarbonates,
63 Alkali metal
64 Bicarbonates
65 Ammonia-soda process,
66 Alkali earth metal,
67 Magnesium,
68 Lead
69 Wet
70 Acidic,
71 Basic,
72 Metallic
73 Acidic
74 Stack,
75 Cyanogen salts
76 From gas purification,
77 Double salts,
78 Cyanamides,
79 Cyanides
80 By nitrogen fixation direct
81 Free carbon
82 Catalytic,
83 Blast-furnace process,
84 Treatment,
85 Halogen
86 Hypothalites,

23. CHEMISTRY—Continued.

Compounds
Salts
Halogen
87 Halides
88 Fluorides and silico-fluorides,
89 Alkali metal,
90 Alkali earth metal,
91 Magnesium,
92 Aluminum
93 Anhydrous
94 Reducing agent
95 Free carbon,
96 Recovery,
97 Copper, zinc, or lead,
98 Arsenic, antimony, or tin
99 By detinning,
100 Ammonium,
101 Nitrogen
102 Nitrates
103 Ammonium,
104 Nitrites,
105 Phosphorus
106 Alkali metal or ammonium
107 Wet,
108 Alkali earth metal
109 Wet,
110 Silicon
111 Base exchange
112 Wet methods
113 Precipitate,
114 Sulphur
115 Thio type
116 Sulphoxalates,
117 Sulphates
118 Alums,
119 Ammonium
120 Purification,
121 Alkali metal,

23. CHEMISTRY—Continued.

Compounds
Salts
Sulphur
Sulphates
122 Alkali earth metal,
123 Aluminum
124 Modifications,
125 Copper or zinc,
126 Iron,
127 Lead,
128 Magnesium,
129 Sulphites
130 Bisulphites
131 Reclaiming,
132 Tower,
133 Tank,
134 Sulphides
135 Copper or zinc,
136 Arsenic, antimony, or tin,
137 Reduction of sulphoxy compound,
138 Combining with free sulphur,
139 Acids and acid anhydrides
140 Of amphoteric metal
141 Aluminum
142 Dry methods,
143 Wet methods,
144 Arsenic, antimony, or tin,
145 Chromium or manganese,
146 Lead,
147 Copper or zinc
148 Dry,
149 Of boron,
150 Carbon dioxide,
151 Of cyanogen,
152 Of halogens

23. CHEMISTRY—Continued.

Compounds

Acids and acid anhydrides
Of halogens
153 Hydrofluoric or hydrofluosilicic,
154 Hydrochloric or hydrobromic
155 Furnace processes,
156 Synthetic,
157 Of nitrogen
158 From nitrates,
159 Treatment
160 Concentration,
161 Recovery,
162 By oxidation,
163 Synthetic,
165 Of phosphorus,
166 Of sulphur
167 Sulphuric acid
168 Oxidizing and mixing,
172 Recovery and purification
173 From sludge acid,
174 Sulphur trioxide
175 Catalytic oxidation
176 Temperature regulation,
177 Sulphur dioxide
178 Recovery and purification,
179 Sulphur burning processes,
180 Concentration,
181 Hydrogen sulphide,
182 Of silicon,
183 Bases
184 Alkali-metal oxides or hydroxides
185 Causticizing,
186 Alkali-earth-metal oxides or hydroxides
187 Peroxides,

23. CHEMISTRY—Continued.

Compounds

Bases
Alkali-earth-metal oxides or hydroxides
188 Hydration
189 Modification,
190 Ammonia derivatives
191 Nitrides
192 Of aluminum,
193 Ammonia
194 From nitrogen compounds by hydrolysis
195 From cyanogen compounds,
196 From gas,
197 From carbonaceous matter,
198 Synthetic
199 High-pressure processes,
200 Iron oxide or hydroxide,
201 Magnesium oxide or hydroxide,
202 Titanium oxide or hydroxide,
203 Ternary oxy compounds,
204 Binary compounds
205 Halides,
206 Sulphides,
207 Hydrogen peroxide,
208 Carbides.

209 **Nonmetals**

209.1 Carbon
209.2 Products,
209.3 By electrothermal treatment,
209.4 By pyrolysis
209.5 Catalytic,
209.6 By incomplete combustion
209.7 Explosive type,
209.8 Flame type,
209.9 Recovery or purification,

23. CHEMISTRY—Continued.

Nonmetals

210 Hydrogen
211 Wet,
212 Dry
213 Carbon-monoxide oxidation,
214 Metallic reduction of hydrogen oxide,
215 Halogens
216 Bromine or iodine
217 Extraction,
216 Distillation,
219 Chlorine,
220 Nitrogen,
221 Oxygen
222 Ozone,
223 Phosphorus,
223.5 Silicon,
224 Sulphur
225 From gases
226 Reduction of sulphur compounds,
227 Sublimation,
229 Fusion.
230 **Analytical and analytical control methods**
231 Dairy,
232 Gas.

239 **Packing and preserving chemicals**
240 Special receptacle
241 Impregnated fabric,
242 Coating
243 Internal,
244 Fluid overlaid,
245 Compression,
246 Absorbing
247 In fluid,
248 Potentially active compositions

23. CHEMISTRY—Continued.

Packing and preserving chemicals

Potentially active compositions
249 Neutralizing agent,
250 Preserving
251 Hydrogen peroxide.
293 **Physical processes**
294 Sublimation,
295 Crystallization
296 Selective
297 With extraction,
298 From natural sources,
299 With extraction,
300 With added material
301 Seed,
302 Alkali metal and ammonium compounds
303 Common salt,
304 Alkaline earth metal and magnesium compounds,
305 Heavy metal or aluminum compounds,
306 Concentration of liquids in liquids
307 With direct heating,
308 Melting out,
309 Extracting, leaching, or dissolving
310 Countercurrent,
311 Stationary bed,
312 Special material treated,
313 Agglomerating
314 Carbon.
252 **Apparatus**
253 Analytical and analytical control
254 Gas analysis
255 Automatic
256 Volumetric,
257 Sampling devices,
258 Dairy,
259 **Manipulative laboratory devices,**

23. CHEMISTRY—Continued.

Apparatus

259.1 Fertilizers
259.2 Acid phosphate,
259.3 Trains,
259.4 Tanks,
259.5 Carbon black making
259.6 Moving collector surface
259.7 Rotating
259.8 Disk or plate type,
259.9 Moving scraper or burner,
260 Trains
261 For sulphur acids,
262 With furnace,
263 Stills
264 For sublimation,
265 Ammonia soda apparatus,
266 Explosives,
267 Extracting or leaching
269 Rotary,
270 Countercurrent
270.5 Extraction of liquids with liquids,
271 Jet agitation.
272 Percolators,
272.5 Plural,
272.6 With fluid circulating means,
273 Crystallizing.
274 Concentrating apparatus
275 Direct heating,
276 Internal heating,
277 Furnaces
278 Sulphur burners,
279 Rotary,
280 Melting separators,
281 Generators
282 Wet,
283 Towers,
284 Chambers and stacks,

23. CHEMISTRY—Continued.

Apparatus.

285 Tanks
286 Rotary,
287 Hydrators,
288 Catalytic
289 High pressure,
290 Autoclaves,
290.5 Cookers or digesters,
291 Chamber elements,
292 Laboratory apparatus elements

24 BUCKLES, BUTTONS, CLASPS, ETC.

1 **Miscellaneous.**

2 **Album fasteners.**

3 **Article holders**

4 Chatelaine safety hooks,
5 Flower
6 Pin attached,
7 Napkin
8 Hook,
9 Neck inclosing,
10 Pencil
11 Clasp attached,
12 Pin attached,
15 Sleeve,
13 Pin attached.
16 **Bale and package ties**
17 Packet holders
18 Cord,
19 Strap tighteners,
20 Metal bands
21 Separate connections
22 One piece
23 Sheet metal,
24 Pivoted parts,
25 Wedging parts,
26 Wire,
27 Wire
28 Separate connections
29 Wire,
30 Wooden bands.
30.5 **Bag fasteners.**
31 **Belt fasteners**
32 Tighteners,
33 Hinged,
34 Lacing,
35 One piece
36 Deflecting prong,

24. BUCKLES, BUTTONS, CLASPS, ETC.—Continued.

Belt fasteners

37 Screw clamp,
38 Splices,
39 Wire.
40 **Buttoners.**
41 **Cuff holders**
42 Adjustable,
43 Clasp button,
44 Clasp clasp,
45 Clasp hook,
46 Clasp pin,
47 Pin button,
48 Pin fastener.
49 **Necktie fasteners**
50 Bands
51 End-securing pin
52 Gripping,
53 Depressors
54 Button engaging,
55 Pin or spur,
56 Button engaging
57 Adjustable,
58 Cord loop,
59 Pivoted or sliding jaw,
60 Pin attached,
61 Collar button combined
62 Clasp attached,
63 Pin attached,
64 Separable fastener,
65 Tie, attached hook.
66 **Paper clips.**
67 **Paper fasteners.**
68 **Strap tighteners**
69 Cam lever and loop
70 Step adjusted,
71 Strap-attached folding lever,

24. BUCKLES, BUTTONS, CLASPS, ETC.—Continued.

Strap tighteners

71.1 Midline
71.2 Winders
71.3 One piece.
72 **Trouser guards and straps.**
72.5 **Bedclothes holders.**
73 **Fasteners combined**
74 Buckle-buckle
75 Separably connected,
76 Buckle pin,
77 Buckle separable
78 Pivoted-lever buckle,
79 Clasp buckle,
80 Clasp button,
81 Clasp clasp
82 Pin attached,
83 Separably connected,
84 Clasp hook,
85 Clasp pin,
86 Pin hook,
87 Pin pin
88 Separably connected.
89 **Interchangeable button loop and pin.**
90 **Buttons and fasteners**
90.5 Loss-preventing devices,
91 Adjustable,
92 Cloth shanks and covers,
93 Multiple attachment,
94 Deflecting prong or rivet
95 Anvil or plate,
96 Integral,
97 Hinged leaf
98 Axially rotating,
99 Double,
100 Sliding,
100.5 Sliding bar,
101 Integral or rigid stud,

24. BUCKLES, BUTTONS, CLASPS, ETC.—Continued.

Buttons and fasteners

102 Link,
103 Pin attached,
104 Separable
105 Screw,
106 Spring
107 Resilient head,
108 Resilient socket,
109 Rotating head,
110 With operating devices,
111 Separate thread bar,
112 Spiral fastener,
113 Covers,
114 Pads.
114.5 **Strap or cable buttons.**
115 **Cord and rope holders**
116 Chain,
117 Lacing terminals
118 Friction disk,
119 Knot inclosing,
120 Pivoted jaw,
121 Resilient clip,
122 Wire,
123 Couplings and sockets
124 Nut clamp,
125 Screw clamp,
126 Sliding part or wedge,
127 Friction disk,
128 Knot engaging,
129 One piece
130 Wedge slot,
131 Wire,
132 Pivoted part
133 Lever tension
134 Cam lever,
135 Screw clamp,
136 Sliding part or wedge.

24. BUCKLES, BUTTONS, CLASPS ETC.—Continued.

137 **Clothespins**
138 Kerf,
139 Wire,
139.1 Plural clasp.
140 **Lacing devices**
141 Eyelets
142 Plastic head,
143 Laces and tips,
144 Studs
149 Roller,
145 Closed loop,
146 Hook
147 Moving part,
148 Plastic head.
150 **Pin fasteners**
151 Armpit shields,
152 Upholstering,
153 Paper
154 Suspending devices,
156 Guards
157 Pivoted,
158 Sliding,
159 Wire
155 Loss-preventing devices,
160 Pivoted,
161 Resilient,
162 Sliding.
163 **Buckles**
164 Harness
165 Combined buckles and snap hooks,
166 Lock
167 Key,
168 Clamping
169 One piece,
170 Pivoted part or lever,
171 Sliding part or wedge,

24. BUCKLES, BUTTONS, CLASPS, ETC.—Continued.

Buckles
Harness
172 Cross bails
173 Pivoted stud plate,
174 Rigid stud,
Penetrating tongue
175 Guarded,
176 One piece,
177 Multiple,
178 Pivoted
179 Lever actuated,
180 Stud,
181 Sliding part or wedge,
182 Strap loops and attaching devices,
183 Loop shields,
184 Garment shielded,
Combined pressure bar and guard
185 Hook attached,
Penetrating prong
186 One piece
187 Hook attached,
188 Pivoted
189 Hook attached,
190 Slide,
191 Pivoted lever
192 Hook attached,
193 Looped strap,
194 Sliding part or wedge
195 Hook attached,
196 Looped strap,
197 Looped strap,
198 One piece
199 Hook attached,
200 Looped strap.
201 **Separable fasteners**
202 Buttonhole protectors,

24. BUCKLES, BUTTONS, CLASPS, ETC.—Continued.

Separable fasteners
203 Multiple
204 Integrally connected,
205 Multiple operated
205.5 With slide checking means,
206 Step adjusting,
207 Runway engaging,
Head and socket
208 Axial closures
209 Link button,
210 Hinged cap plate,
211 Pivoted or sliding lock,
212 Pivoted head,
213 Resilient head
214 Rigid socket,
215 Wire,
216 Resilient socket
217 Rigid head,
218 Wire,
219 Rigid head,
220 Rigid socket,
221 Rotating head,
222 Lateral closures
223 Auxiliary locking devices,
224 Resilient,
225 Hook and eye
226 Sheet metal
227 Metallic attachment,
228 Wire
229 Metallic attachment,
230 Lateral sliding.
230.5 **Hooks.**
231 **Snap hooks**
240 Watch-chain attaching,
241 Locking devices

24. BUCKLES, BUTTONS, CLASPS, ETC.—Continued.

Snap hooks
Locking devices.
242 Tension operated,
232 Pivoted
233 Spring
234 Coil
235 Axial,
236 Resilient
237 One piece,
238 Sliding
239 Spring.
243 **Clasps**
244 Ball or roll,
245 Button and loop
246 Pivoted or resilient arms,
247 Slide,
248 Pivoted
249 Rod, pipe, or handle,
250 Separate lock lever,
251 Sliding lock,
252 Spring
253 Axial coil,
254 Rod, pipe, or handle,
255 Resilient
256 Circular,
257 Rod, pipe, or handle,
258 Separate lock lever,
260 Sliding lock,
259 Sheet metal,
261 Wire,
262 Protected jaws,
263 Sliding jaw,
264 Wedge slot.
265 **Strap-end-attaching devices.**
266 **Draw strings.**
267 **Pivoted edge stays.**

25 PLASTIC BLOCK AND EARTHENWARE APPARATUS.

1 **Miscellaneous.**
2 **Brickmaking plants.**
3 **Electrical-fixture machines.**
4 **Knob machines.**
5 **Playing-marble machines.**
6 **Tobacco-pipe machines.**
7 **Soap-molding devices**
8 Die expressing,
9 Rotary mold,
10 Stationary mold.
21 **Roller forming.**
22 **Pottery machines**
23 Fluid operated,
24 Jiggers
25 Irregular form,
26 Rotary former,
27 Presses
28 Bottom ejectors,
29 Casting.
30 **Pipe machines**
31 Fluid operated,
32 In situ,
33 Multitubular
34 Perforators,
35 Perforating former,
36 Compacting former,
37 Tamper,
38 Plastic lining and coating,
39 Socket formers,
40 Turners.
41 **Block-molding machines**
42 Flat tile,
43 Roofing tile,
44 Undercutting.

25. PLASTIC BLOCK AND EARTHENWARE APPARATUS—Con.

45 **Block presses**
Portable mold
Movable support
46 Toward feed,
47 Transverse to feed,
48 Supported in race
49 Plunger
50 Lever,
51 Pitman,
52 Rack and pinion
53 Mold pushers,
54 Reciprocating mold
55 Fluid operated,
Plunger
56 In line of mold travel
57 Cam,
58 Drop,
59 Lever,
60 Transverse to mold travel
61 Cam,
62 Lever,
Rotary mold
63 Fluid operated,
Facial
64 Continuous
65 Plunger, cam,
66 Intermittent
67 Opposed plunger
68 Lever,
69 Single-surface plunger
70 Cam,
71 Drop,
72 Lever,
73 Pitman,
74 Toggle,

25. PLASTIC BLOCK AND EARTHENWARE APPARATUS—Con.

Block presses
Rotary mold
Peripheral
75 Continuous
76 Opposed mold wheel
77 Mating
78 Plunger, cam,
79 Pressure roller,
80 Intermittent
81 Plunger, cam,
82 Plunger, lever,
Stationary mold
83 Single-surface plunger
84 Fluid operated,
85 Cam,
86 Drop,
87 Lever,
88 Pitman,
89 Toggle,
90 Opposed plunger
91 Fluid operated,
92 Cam,
93 Cam and lever,
94 Cam and pitman,
95 Lever,
96 Pitman,
97 Toggle,
98 Toggle and connecting bar,
Endless chain of molds
99 Continuous travel,
100 Intermittent travel,
101 Expanding mold,
102 Plungers,
103 Chargers,
104 Strikes and trimmers.
11 **Die expressing**
13 Pottery,

25. PLASTIC BLOCK AND EARTHENWARE APPARATUS—Con.

Die expressing
12 Detached blocks,
14 Screw ejector,
15 Plunger ejector
16 Fluid operated,
17 Dies
20 Perforating and ornamenting,
18 Liquid lubricated,
19 Steam lubricated.
105 **Cutters**
106 Soap,
107 Reciprocating
108 Horizontally,
Rotating
109 Longitudinal axis,
110 Transverse axis,
111 Oscillating,
112 Stationary,
113 Tables,
114 Cleaners.
115 **Sanders**
116 Mold
117 Rotary drum.
118 **Molds**
119 Block
120 Ejectors,
121 Expanding and separable,
122 Linings,
123 Ornamental,
124 Cistern,
125 Fence,
126 Pipe
127 Expanding and separable,
128 Cores
129 Pottery,
130 Sarcophagi and tank,
131 Wall,

25. PLASTIC BLOCK AND EARTHENWARE APPARATUS—Con.

Molds
131.5 Centering
131.6 Wheel mounted.
132 **Kilns**
133 Indurating,
134 Continuous
135 Separate kiln,
136 Perforated floor,
137 Perforated partition,
138 Temporary partition,
139 Common flue,
140 Combined up and down draft
141 Reversible,
142 Horizontally traveling material,
143 Vertically traveling material,
144 Muffle,
145 Downdraft
146 Muffle bottom,
147 Updraft,
148 Forced draft,
149 Fluid fuel,
150 Steam combustion,
151 Furnaces
152 Grates,
153 Saggers.
Processes
154 Reenforcing and finishing,
155 Concrete-block type,
156 Clay type
157 Firing
158 Road ballast.

26 TEXTILES, CLOTH FINISHING.

1 **Miscellaneous.**
2 **Pile fabrics.**
3 **Singeing**
4 Articles
5 On attached form,
6 Heated contact element.
7 **Cutting**
8 Pile loops
9 With simultaneous feeding
10 With stopping,
11 Float threads
12 With feeding,
13 Double pile fabric
14 Loom type
15 Shearing
16 Ornamental,
17 With seam detector,
18 Automatic extension rests.
18.5 **Shrinking.**
18.6 **Thread compacting.**
19 **Fulling**
20 Continuous web machines
21 Pleating type,
22 Beater type
23 Gravity stroke,
24 Stopping.
25 **Beating**
26 Beetling.
27 **Rubbing**
28 Abrasive.
29 **Napping**
30 Ornamental,
31 Napping surface feature
32 Machines,
33 Planetary
34 Including drive feature
35 Drives,

26. TEXTILES, CLOTH FINISHING—Continued.

Napping
36 Reciprocating napping element,
37 Single fixed-position napping roll.
51 **Stretching or spreading and working**
52 Traveling clamp or hook type
53 Reciprocating frames.
54 **Stretching or spreading**
55 Tubular fabric
56 With drying,
57 Traveling clamp or hook type
58 Wheel type
59 With drying,
60 With drying,
61 Chains or chain guide features,
62 Clamps or hooks,
63 Roller spreaders
64 Axially sliding sections,
65 Selvage engaging rolls
66 Cloth controlled guiding
67 Variable-angle rolls,
68 With drying.
69 **Ornamental.**
70 **Inspecting.**

27 UNDERTAKING.

1 **Miscellaneous.**
2 **Coffins**
3 Composite,
4 Foldable sections,
5 Metal and wood,
6 Metallic,
7 Plastic material,
8 Glass,
9 Canopy,
10 Corner structures,
11 Corpse preserving,
12 Corpse-raising devices,
13 Headrests,
14 Lids
15 Sliding panel,
16 Swinging,
17 Joints,
18 Supports,
19 Linings and coverings,
20 Shields.
21 **Embalming**
22 Processes,
23 Apparatus,
24 Injectors and ejectors.
25 **Chin supports.**
26 **Casket grave rests.**
27 **Casket carriers.**
28 **Corpse carriers.**
29 **Grave linings.**
30 **Grave coverings.**
31 **Life signals.**
32 **Lowering devices**
33 Hand straps
34 Releasers.
35 **Portable coffin casings.**

28 TEXTILES.

1 **Miscellaneous.**
2 **Tuft or tassel making.**
3 **Heddle making.**
4 **Needling.**
5 **Felting**
6 Machines
7 Roll pack
8 Roller pocket
9 Roller feature,
10 Rollers,
11 Progressive feed
12 Reciprocating platen,
13 Reciprocating platen,
14 Reciprocating platen.
15 **Thread frames.**
16 **Carpet-rag loopers.**
17 **Fabric ravelers**
18 Edge.
19 **Bobbin strippers**
20 Slipping off.
21 **Packaging strands.**
22 **Warp preparation**
23 Chain manipulation
24 Wrapping or unwrapping,
25 Linking,
26 Winding,
27 Coiling,
28 Dressing,
29 Pattern setting,
30 Reeling
31 Section building,
32 Beaming
33 Narrow warps,
34 Supply replenishing,
35 Tension control
36 Speed regulation,
37 Traversing,

28 TEXTILES

1 APPARATUS
2 Tuft of tassel making
3 Heddle making
4 Needling
5 Felting
7 Roll pack
8 Roller pocket
9 Roller feature
10 Rollers
11 Progressive feed
12 Reciprocating platen
13 Reciprocating platen
14 Reciprocating platen
15 Thread frames
16 Carpet-rag loopers
17 Fabric ravelers
18 Edge
19 Bobbin strippers
20 Slipping off
21 Strand packaging
22 Warp preparing
23 Chain manipulating
24 Wrapping or unwrapping
25 Linking
26 Winding
27 Coiling
28 Dressing
29 Pattern setting
30 Reeling
31 Section building
32 Beaming
33 Narrow warps
34 Supply replenishing
35 Tension control
36 Speed regulation

28. TEXTILES—Continued.

APPARATUS
Warp preparing
Beaming
37 Traversing
38 Pressing
39 Driving
40 Leasing
41 Loom replenishing
42 Warp or loom elements supports
43 Warp selecting and separating
44 Drawing
45 Reeding
46 Heddle or detector manipulation
47 Uniting
48 Twisting
49 Tying
50 Stopping
51 Electrical
52 Arrestable vibrator
53 Pivoted detector
54 Combs and guides
55 Expansion
55.2 Singeing
55.3 Clearing
55.5 Pile tufting, pattern setting
55.6 With loom replenishing
56 Pile tufting, loom replenishing
57 Thread finishing
58 Hanks and cops
59 With fluid treatment
59.5 Stretching
60 Silk type
61 Heating or drying
62 Heating or drying

28. TEXTILES—Continued.

APPARATUS
Thread finishing
63 Singeing
64 Knot or slub detecting
65 Brushing or combing
66 Shearing
67 Rubbing
68 Stripping guides
69 Vitreous type
70 Slot
71 Horizontal
71.3 Stretching
71.4 With stopping
71.5 Strand feeding
71.6 Cage type
71.7 Cantilever
72 PROCESSES
72.2 Needling
72.3 Felting
72.5 Preparing warps
72.6 With coating, dyeing or fluid treatment
73 With incorporation of plasticizable material
74 With coating or dyeing
75 Strands, filaments or fibers
76 With fluid treatment
77 With stitching
78 PRODUCTS
79 Needled or felted
80 Coated, impregnated or dyed
81 Strand structures
82 Filaments and fibers

29 METAL WORKING

1 Miscellaneous
Special work
1.1 Arms making
1.11 Ordnance
1.2 Projectile making
1.21 Hollow
1.22 Bullets or shot
1.23 Jacketed or composite
1.3 Cartridge-case making
1.31 Heading
1.32 Trimming
2 Battery-grid making
3 Buckle making
4 Button-fastener making
4.5 Comminuting metal
5 Cotter-pin making
6 Crank-shaft making
7 Eyebolt and hook making
8 Finger-ring forming and sizing
9 Fishhook making
10 Gem and jewel setting
11 Hinge making and assembling
12 Lacing-stud making
13 Paper-fastener making
14 Plow and cultivator irons, making
15 Puddlers' balls, working
16 Railway-chair making
17 Sheet-metal and foil manufacture
18 Processes
19 Pack manipulation
20 Spectacle-frame making
21 Stereotype-plate finishing
22 Tire upsetting, cutting, punching, etc.
23 Toothed-cylinder making

29. METAL WORKING—Con.

Special work
23.5 Impeller making
24 Type finishing and grooving
25 Umbrella-frame making
25.10 Electric lamp or space discharge device making
25.11 Processes and blanks
25.12 Spark plug type
25.13 Assembly
25.14 Electrode making
25.15 Electrode mounting
25.16 Plural electrode mounting
25.17 Electrode making
25.18 Electrode shaping
25.19 Assembly apparatus
25.20 Combined with diverse type apparatus
25.41 Electric condenser making
25.42 Solid dielectric type
33 Combined machines
Type of machine
26 Drill press
27 Lathe
28 Grinding attachment
29 Pulley and wheel
30 Planer
31 Vise, drill, etc.
32 Anvil attached
34 Forging and bending, cutting or punching
35 Forging and rolling
Turret
36 Multiple turret
37 Stock turret
38 Blank turret

29. METAL WORKING—Con.

Combined machines
Turret
39 Tool turret
40 Rotary tool holder
41 Sliding tool holder
42 Fluid operated
Cam operated
43 Longitudinal turret axis
44 Transverse turret axis
45 Lever operated
46 Rack-and-pinion operated
47 Screw operated
48 Turrets
Turret rotating and locking
49 Frictional and positive
50 Positive
Multiple-tool holder
51 Laterally movable stock holder
52 Axial tool and transversely movable slide rest
53 Rotary tool spindle
54 Longitudinally and transversely movable
55 Rotary tool spindle
56 Oscillating tool
57 Attachments
58 Stock and blank feeders
59 Advancing stock support
60 Magazine
61 Reciprocating gripper
62 Sleeve
63 Roller
64 Speed controllers
65 Carriage stop mechanisms
66 Metal breakers

29. METAL WORKING—Con.

67 Sawing
68 Band saw
69 Circular saw
70 Multiple
71 Rim driven
72 Oscillating saw
73 Reciprocating saw
74 Vertical
75 Hand driven
76 Filing
77 File blank strippers
78 Files and rasps
79 Sectional
80 Holders
81 Scale removers and preventers
89.5 Burning-in, wearing-in, and oil-burnishing
90 Burnishing
90.5 Continuous feed
95 Cutters
95.1 Broaching
106 Lubricators
103 Rotary
104 Gang
105 Inserted tooth
102 Profiled circular blade
96 Inserted blade
97 Multiple
97.5 Resilient support
98 Angular adjustment
101 Arc
148 Processes of manufacture, assembly, and disassembly
148.2 Hollow articles
148.3 Agricultural devices
148.4 Balls, rolls, races, and cages

Processes of manufacture, assembly, and disassembly

149 Beams and rails, mechanically capped
149.5 Bearings
150 Braces and brackets
151 Bridge irons
152 Carriage irons
152.1 Brake elements
152.2 Drums
153 Axles
153.1 Axle housings
154 Axle boxes and skeins
155 Columns and girders
155.41 Wire or filaments
155.42 With covering and/or coating
155.5 Electrical devices
155.52 Metal insulator parts
155.53 Rotors
155.54 Commutators
155.55 Contacts and terminals
156 Ferrules, rings, thimbles, and tubes
156.4 Fluid motors and pumps
156.5 Pistons and pitmen
156.6 Packing rings
156.61 Forging
156.62 Severing
156.63 Surface, cutting
156.7 Valves and seats
156.8 Impellers
157 Gas and water
157.1 Valves
157.3 Radiators
157.4 Boilers, heaters, and tubes
157.5 Flue connections
157.6 Return connections
158 Traps

29. METAL WORKING—Con.

Processes of manufacture, assembly, and disassembly

159 Pulleys, wheels, and gears
Land wheels
159.01 Disc
Spoke
159.02 Tension
159.03 Compression
159.1 Tires and rims
159.2 Gears
159.3 Hubs
160 Grilles
160.4 Ingots
160.5 From comminuted metal
160.6 Jewelry and dentistry
161 Knobs and knob shanks
162 Lined pipes and tanks
163.5 Multiperforated metal
164 Railway-car irons
165 Axles
166 Axle boxes
167 Couplings and drawbars
168 Wheels
169 Railway-track irons
169.2 Rail bonds
169.5 Sound devices
170 Spinners' and weavers' irons
171 Spinning rings
172 Spring-head clips
173 Springs
175 Turnbuckles
176 Velocipede irons
177 Watches and clocks
178 Arbors, pinions, and balances
179 Cases, crowns, and pendants
179.5 Bonded metal to non-metallic joints
188 Compound bars and tubes
189 Compound plate

29. METAL WORKING—Con.

180 **Metal stock and blanks**
181 Compound
182 Bars and tubes
Piles and fagots
183 Parallel bars
184 Railroad rails
185 Tubular
186 Box and scrap
187 Tube and plate, interlocked joint
200 **Assembling and disassembling apparatus**
201 Roller and ball bearings
202 Radiators and heat exchangers
203 Electrical devices
204 Batteries
205 Motors and generators
206 Prong plug type connectors
207 Travelers on rings, or rings on bobbins
208 Automatic machines
209 Doll parts
210 Watch and clock crystals
211 With magazine supply
212 Hand manipulable tool
213 Valve applying and removing
214 Engine valve unit pullers or appliers
215 Engine valve spring compressors, only
216 Plural spring engagement
217 Screw operated
218 Parallel or tong type, side entrance

29. METAL WORKING—Con.

Assembling and disassembling apparatus

Valve applying and removing
Engine valve spring compressors, only
219 Lever operated
220 Single jaw or valve engagement
221 Plier type
222 Piston ring inserters and removers
223 Plier type operation
224 With ring encirclement
225 Spring appliers and removers
226 Transmission springs
227 Helical springs
228 Flat spiral springs (e. g., watch and clock type)
229 Circular springs
230 Leaf springs
231 Staking watches and clocks
232 Plier type
233 Lining to brake shoes
234 Tube and coextensive core
235 Applying and removing resilient articles (e. g., tubes, sleeves, etc.)
236 Well protectors to sucker rods
237 Couplings to conduits
238 Compressing parts together face to face
239 Spreading parts apart or separating them from face to face engagement
240 By rotation
241 By stringing
242 Tool handles and tools
243 Tool chucks and tools

29. METAL WORKING—Con.

Assembling and dissassembling apparatus

244 Pullers or pushers, contained force multiplying operator
245 Hub caps
246 Battery terminals
247 Cotter pins
248 Plier type
249 Valve stem pins and keys
250 Machine keys
251 Arbor type pressers
252 Fluid operator
253 Wedge operator
254 Percussion or explosive operator
255 Tube, sleeve, or ferrule inserting or removing
256 Screw operated
257 C-frame
258 Central screw, work-engagers around screw
259 Work-engager arms along or parallel to screw
260 With arm connecting engaging means
261 Pivotal arms
262 Pivotal grippers on screw
263 Tubular or tube segment form work-engagers
264 Screw threaded work-engager
265 Movable grippers on screw
266 Plate or bar form work-engagers
267 Lever operator
268 Plier type

29. METAL WORKING—Con.

Assembling and disassembling apparatus

269 Piston ring group contractors and holders
270 Hand manipulable tools
271 Aligners or centerers
272 Tube with tube
273 Auto wheel with auto chassis
274 Clutch plates
275 Impact receiving tools
276 C-frame
277 Thread protectors (wheel axle type)
278 Hand grippers for direct push or pull
279 Centrifugal separators
280 Tube sleeve or ferrule applying and removing
281 Thread-tapping grip
282 Tube, sleeve or ferrule
283 Work grippers, anvils and elements
284 Work holders
285 Supported by work (e. g., gauge holders and hangers)
286 Work pieces positioned in related arrangement
287 Positioned coaxially
288 Stands
289 Motor or engine
290 Radiator

30 CUTLERY

1 Miscellaneous
2 Carton openers
3 Can openers
4 With motor
5 Shear type
6 Plural cutter
7 Right or left hand
8 With can moving means
9 Rotatable disc cutter
10 With can support
11 Sweep cutter
12 With cutter feeding and/or can gripping means
13 Rotatable disc cutter
14 Bead gripping
15 Continuous grip
16 Push or punch type
17 Sweep cutter
18 Can penetrating pivot
19 Rotatable disc cutter
20 Adjustable cutter radius
21 Freely slidable cutter
22 Fulcrum type
23 Side cut
24 Citrus fruit cutters
25 Corer
26 Manicure
27 Guarded edge
28 Nippers
29 Shears
30 Hair planers
31 Convertible
32 Razors
33 Special use

30. CUTLERY—Continued.

Razors

34 Combined
35 With means to facilitate sharpening
36 Permanently attached sharpener
37 Means for holding or guiding sharpener
38 Blade shifting mechanism
39 Safety impulse
40 With blade magazine
41 With waste collecting, razor cleaning and/or dispensing
42 With blade moving means
43 Shearing
44 Vibratory
45 Electric
46 Traction
47 Knockdown and/or folding
48 Inclined edge
49 Curved edge
50 Multiple blade
51 Detachable, guarded cutting edge
52 Tensioned blade edge
53 Longitudinal or old style
54 With relative blade and guard adjustment
55 Separable guard
57 Pivoted blade
58 Pivoted cap
59 Multiple guard
60 With operator and relative blade and guard adjustment
61 With operator and relative blade and guard adjustment
62 Slidable blade
63 With relative blade and guard adjustment
64 With blade lock
65 Multiple guard
66 Slidable lock

30. CUTLERY—Continued.

Razors

Detachable, guarded cutting edge
67 Hook and lock
68 Bolt connected
69 Threaded
70 Multiple guard
71 With relative blade and guard adjustment
72 Flexible blade
73 Spaced guard edge
74 Magnetic
74.1 Multiple guard
75 Aligning means
76 Corner construction
77 Guards
78 Blade supported
79 With relative blade and guard adjustment
80 Rail guard
81 Edge structure
82 Modified teeth
83 Rail
84 Caps
85 Handles
86 Receptacle
87 Pivoted
88 Longitudinal
89 Angularly adjustable handle and head
90 Attachments and accessories
91 **Tube and sheath splitters**
92 **Pipe and rod cutters**
93 Rotary
94 External
95 Pipe or rod encircling
96 With clamping means
97 Rotary power source
98 Ratchet
99 Ratchet

30. CUTLERY—Continued.

Pipe and rod cutters

Rotary
External
Pipe or rod encircling
100 Chain link type
101 Disc cutter
102 Disc cutter
103 Internal
104 Eccentrically pivoted
105 Slidably projected
106 Wedge
107 Screw feed
108 Pivoted lever mounted
109 **Cigar tip cutters**
110 Rotary power source
111 Hand
112 Pivoted blade
113 Reciprocating blade
114 **Segmenters**
115 **Plastic material cutters**
116 Wire
117 Plural
118 **Button hole type**
119 With punch
120 Shears
121 **Tree hacks**
122 **Convertible**
123 **Combined**
124 With material holder or disposal
125 Handle receptacle
126 Spool
127 Twine holder or guide
128 Ejectors or strippers
129 Fork
130 Annular cutter
131 Shears
132 Multiple shearing position
133 Suction disposal means
134 Grip type
135 Spring opened

30. CUTLERY—Continued.

Combined

With material holder or disposal
136 Knives and scrapers
136.5 With closure or portable receptacle support
137 Forks
138 With sharpening feature
139 Rotary sharpener
140 With heater
141 Spoons with fluid conductors
142 Cutlery
143 Sheathed
144 Saws
145 Nippers and shears
146 Shears and knife
147 Knives, forks and spoons
148 Knives and forks
149 Knives and spoons
150 Forks and spoons
151 **Sheathed**
152 Plural blade
153 Folding sheath
154 Compound blade movement
155 Pivoted blade
156 Detachable blade type
157 End tang connected
158 With blade opening means
159 Spring opened
160 Locked blade
161 Locked blade
162 Sliding blade
163 Gravity opened
164 Elements
164.5 **Ice pick or chipper type**
164.6 With impact moving means
164.7 With guard and/or guide
164.8 Plural points or edges

30. Cutlery—Continued.

165 **Cutting tools**
166 Saws
167 Rotary,
168 Cold chisels,
169 Scrapers
170 Wheeled,
171 Hoe type,
172 Plural blade,
173 Plural cooperating blades
174 Corer type,
175 Nippers
176 Multiplex,
177 Adjustable position cutter,
178 Form cutter,
179 With guide and/or gage,
180 With motor,
181 Compound blade movement,
182 Reciprocating blade
183 Lever and cam,
184 Lever and link,
185 Toothed slide and lever,
186 Pivoted blade
187 With blade moving means
188 One movable blade
189 Lever and cam,
190 Lever and link
191 Pivoted handles
192 Handles interlinked or geared,
193 Common pivot,
194 Shears
195 Hair thinners,
196 Multiple shearing position
197 Multiplex,
198 Body supported,

30. Cutlery—Continued.

Cutting tools
Plural cooperating blades
Shears
Multiple shearing position
199 Adjustable angle
200 With cut regulator
201 Adjustable
202 Automatic,
203 Convertible, power or manual operated,
204 Compound blade movement,
205 Rotary blade
206 With motor,
207 With blade tension means,
208 Reciprocating and/or oscillating blade
209 Reciprocating or oscillating power source
210 With motor,
211 Pivoted handles
212 With spring return
213 And blade tension means,
214 With blade tension means,
215 Rotary power source
216 With motor,
217 Crank or cam, pitman and lever,
218 Crank or cam, lever and slide,
219 Crank or cam and lever,
220 Crank or cam and slide,
221 With blade tension means
222 And friction reducing feature,

30. Cutlery—Continued.

Cutting tools
Plural cooperating blades
Shears
Multiple shearing position
223 Blade assembly
224 With friction reducing feature,
225 Blades,
226 Multiplex
227 With blade moving means,
228 With motor,
229 Form cutter
230 Zigzag,
231 With support
232 Hand or finger,
233 With guard and/or guide,
234 Spring joint
235 Offset handle and blade,
236 Detachable blade,
237 Compound blade movement
238 One movable blade,
239 Intermediate pivot,
240 Rotary blade,
241 Reciprocating blade
242 Lever and link,
243 Toothed lever and slide,
244 Pivoted blade
245 With blade moving means
246 Push or pull type,
247 Rotary power source,
248 Offset blade and handle,
249 One movable blade
250 Pivoted handle
251 Lever and connecting link,
252 Pivoted handles,

30. Cutlery—Continued.

Cutting tools
Plural cooperating blades
Shears
Pivoted blade
253 End pivot,
254 Intermediate pivot
255 Foldable,
256 Right or left hand,
257 Offset blade and handle,
258 Blade and slot,
259 Offset pivot,
260 Detachable blade and handle,
261 Spring opened or closed
262 With latch,
263 Rotary blade
264 With motor,
265 Two rotary blades,
266 Joints and blade tension means
267 With friction reducing feature,
268 Spring tension
269 Threadless pin type,
270 Nut lock type,
271 Stops and bumpers,
272 With blade moving means
273 Base supported
274 Band knife,
275 With presser foot,
276 Rotary blade
277 Impact,
278 With material receiving opening
279 Plural blade or cutting edge,
280 Push or pull type
281 Spoke shave type,
282 With blade guide,

30. CUTLERY—Continued.

Cutting tools

With material receiving opening

283 Adjustable

284 Detachable guard,

285 Detachable guard,

286 With guard and/or guide

287 Plural blade or cutting edge,

288 Diverse kinds,

289 Blade or material guide

290 With support

291 Hand or finger supported,

292 Traveling roller blade,

293 Adjustable,

294 Push or pull type,

295 Hand guard,

296 With support or attaching means

297 Leg or foot supported,

298 Hand or finger supported,

299 Plural blade

300 Sweep cutter,

30. CUTLERY—Continued.

Cutting tools

Plural blade

301 Annular blade

302 With radiating or crossed blades,

303 Radiating or crossed blades,

304 Parallel blades

305 Push or stamp type,

306 Traveling roller cutter

307 Disc blade,

308 Cleaver type,

309 Sickle or scythe type,

310 Sweep cutter

311 Screw penetrator,

312 Plural handle or grip

313 Draw knives,

314 Push and/or pull type

315 Push or stamp type

316 Annular blade,

317 Pull type,

318 Swinging stroke type,

319 Traveling roller blade,

30. CUTLERY—Continued.

Cutting tools

320 Adjustable blade

321 Pivoted.

322 **Forks**

323 With hand guard and/or support.

324 **Spoons**

325 Perforated,

326 With cover and/or guard,

327 With support,

328 Reinforced.

329 **Holders for detachable blades**

330 Pivoted part

331 End pivot,

332 Knockdown holder

333 One movable side,

334 U-strap holder,

335 Sliding blade assembly

336 Spring jaw type,

337 Interlocked blade and holder

338 Spring jaw type,

339 Apertured blade.

30. CUTLERY—Continued.

340 **Handles and blade connections**

341 Shear or nipper type,

342 Blade connections

343 Cast-on handle,

344 Welded, riveted or bolted.

345 **Materials.**

346 **Blades**

347 Rotary,

348 Reinforced,

349 Detachable cutting edge,

350 Metallurgical feature,

351 Apertured, notched or lugged,

352 Reamer type,

353 Plural cutting edge

Razor type

354 With more than two cutting edges,

355 Toothed or waved,

356 Longitudinally curved,

357 Edge structure.

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31 DAIRY.

1 **Miscellaneous.**
2 **Milk-treating apparatus**
3 Cream separation,
4 Aerators and coolers.
5 **Butter and cheese cutters**
6 With plate dispenser,
7 With mold
8 Expresser,
Rotary
9 Vertical axis,
10 Horizontal axis,
11 Inserter,
12 Expresser
13 Vertical feeder,
14 Horizontal feeder,
15 With indicator
16 Wire cutter,
17 Horizontal feeder,
18 Pivoted cutter, horizontal axis,
19 Vertical reciprocating cutter,
20 Horizontal feeder,
21 Vertical feeder,
22 Wire cutter
23 Series
24 Cut-off cutter,
25 Stationery bed,
26 Elevating bed,
28 Pivoted cutter, horizontal axis
29 Center post,
30 Vertical reciprocating cutter,
32 Accessories.
33 **Combined churn and butter worker.**
34 **Churns.**
35 **Butter workers**
36 With mold,
37 Screened expresser.
38 Rotary table and roll,

31. DAIRY—Continued.
Butter workers
39 Table and roll,
40 Coacting squeezer,
41 Lever.
42 **Molds**
43 Tong,
44 Plunger,
45 Box.
46 **Cheese apparatus**
47 Vats
48 Curd breakers,
49 Turners.
50 **Milking pails and cans**
51 Inlet
52 Valved,
53 Outlet,
54 Lap supported.
56 **Milking stools**
57 With pail support.
58 **Milkers**
59 Catheter
60 Suction,
Suction and compression
61 Suction pulsator
62 Can closure,
63 Manifold or claw,
64 Pressure pulsator
65 Can closure,
66 Manifold or claw,
67 Mechanical compressor.
Suction
68 Pulsator
69 Pulsators,
70 Can closure,
71 Manifold or claw,
72 Teat cup,
73 Air pump,
74 Milk pump,

31. DAIRY—Continued.
Milkers
Compression
75 Fluid pulsator
76 Teat cup
77 Piston operated,
78 Pulsators,
79 Mechanical
80 Hand supported and operated,
81 Hand conduit,
82 Milk releasers,
83 Manifolds or claws,
84 Teat cups
85 Two-chambered,
86 Vacuum regulators and cutoffs,
87 Processes.
Processes
89 Butter, cream, and milk.

32 DENTISTRY.

1 **Miscellaneous.**
2 **Dentures**
3 Suction devices,
4 Connected upper and lower,
5 Partial
6 Fixed,
7 Lingual bars.
8 **Teeth**
9 Interchangeable,
10 Permanently attachable,
11 Set ups,
12 Crowns
13 Pivot.
14 **Orthodontic devices.**
15 **Fillings**
16 Foil.
17 **Impression devices**
18 Impression dividing,
19 Bite
20 Face bows,
21 Jaw control devices.
22 **Equipment stands,**
23 **Engines,**
24 Standard,
25 Bracket,
26 Hand pieces
27 Angular,
28 Fluid attachments,
29 Guards,
30 Sanitary covers,
31 Dust collectors.
32 **Articulators.**
33 **Saliva ejectors.**
34 **Dam devices**
35 Holders
36 Tooth clamps.

DENTISTRY—Continued.

37 **Foil condensers.**
38 **Plaster trimmers.**
39 **Mixing slabs.**
40 **Instruments**
41 Crown
42 Shapers,
43 Removers
44 Pivot tooth,
45 Slitters,
46 Cutters
47 Veterinary,
48 Rotary
49 Shapers,
50 Scalers,
Pluggers
51 Hand
52 Mechanical,
53 Power operated
54 Angular,
55 Spring motor,
56 Air motor,
57 Broaches,
58 Grinders and polishers
59 Rotary,
60 Fillings carriers,
61 Extractors
62 Forceps,
63 Matrices,
64 Separators,
65 Backing,
66 Orthodontic,
67 Paralleling,
68 Tooth holders.
69 **Mirrors.**
70 **Wax modeling.**
71 **Teaching devices and methods.**

33 GEOMETRICAL INSTRUMENTS.

1 **Miscellaneous.**
2 **Apparel**
3 Footwear
4 Laying out
5 Patterns,
6 Processes,
7 Leveling feature,
8 Stand supported
9 Skirts
10 Platform,
11 Laying out
12 Patterns and charts
13 Perforated,
14 Adjustable
15 Conforming,
16 Adjustable,
17 Processes.
18 **Scribers**
19 Graduating,
20 Sight-line controlled,
21 Curved surface
22 Pantographic,
23 Pantographic
24 Multiplane,
25 Parallelogram type,
26 Compound curved and straight line,
27 Curved line
28 Lens,
29 Stair,
30 Ellipsographs
31 Right-angle guides,

33. GEOMETRICAL INSTRUMENTS—Continued.

Scribers
32 Straight line
33 Clapboard,
34 Ink
35 Traveling markers
36 Rotary,
37 Rotary markers
38 Blank space,
39 Blank space,
40 Set shift,
41 Parallel line
42 Edge guided
43 Bevel set,
44 Multimarkers,
45 Machine type.
46 **Light-ray type**
46.5 Aircraft type,
47 Gun sights
48 Ordnance
49 Automatic gun-movement compensators,
50 Firearm-telescope type,
51 Multisight line,
52 Particular surfaces,
53 Variable
54 Rotatable series,
55 Vertically, laterally, and folding,
56 Vertically and laterally,
57 Vertically and folding,
58 Vertically,
59 Laterally,

33. GEOMETRICAL INSTRUMENTS—Continued.

Light-ray type
60 Track leveling and gauging,
61 Solar
62 Time computing,
63 Multisight line
64 Common viewpoint,
65 Relative angular and sliding adjustment,
66 Relative angular adjustment,
67 Chart and straightedge features,
68 Angular and sliding adjustment,
69 Vertical and horizontal angle measurers,
70 Vertical-angle measurers
71 Distance-finding feature,
72 Horizontal-angle measurers,
73 Levels,
74 Rods and targets.
75 **Straightedge type**
76 Base attached
77 Perspective plotters,
78 Rotary base,
79 Universal parallelism,
80 Both ends connected,
81 Set shift,
82 Clapboard marking,
83 Paper tearing,
84 Shaft aligning and leveling,
85 Wall guides and plumbs,
86 Cord
87 Chalking feature,
88 Leveling feature
89 Square type,
90 Multiplane,
91 Intercontrolled bevel blades.

33. GEOMETRICAL INSTRUMENTS—Continued.

Straightedge type

92 Square and hypotenuse,
93 Square and pivoted straightedge
94 Sliding,
95 Square and sliding nonpivoted straightedge,
96 Square and fixed straightedge,
97 Pivoted straightedge and sliding nonpivoted,
98 Multipivoted straightedges,
99 T head and pivoted straightedge
100 Locking,
101 Sliding,
102 Sliding pivotal adjustment,
103 Sliding nonpivotal adjustment,
104 Polygons,
105 Folding-rule type
106 Opposed contact attachments,
107 Rules and rulers
108 Parallel
109 Rolling,
110 Set shift,
111 Scale markings,
112 Squares
113 Scale markings,
114 Separable joints,
115 Pivot joints
116 90° limit
117 Locking,
118 180° limit
119 Locking,
120 Locking.
121 **Area integrators**
122 Planimeters,
123 Electrical,
124 Rolling contact.

33. GEOMETRICAL INSTRUMENTS—Continued.

125 **Distance**
126 Sounding type
126.4 With sampling,
126.5 Line and lead type
126.6 Automatic reel,
126.7 Ullage rods,
127 Fabric and cord
128 Bolt,
129 Rolling contact
130 Cutting feature
131 Predetermined stop or signal.
132 Predetermined stop or signal,
133 Computing,
134 Nonfeeding,
135 Cutting feature,
136 Predetermined stop or signal.
137 Tape
138 Reel feature
139 Dial
140 Computing,
141 Rolling contact
141.5 Combined,
142 Computing,
143 Opposed contacts
144 Track
145 Leveling feature,
146 Dial,
147 Dial
148 On pivoted type,
149 Pivoted
150 Proportional,
151 Point parallelizing,
152 Extensible leg,
153 Joints and setters
154 Screw adjustment
155 Tangent,
156 Median,
157 Median handle,

33. GEOMETRICAL INSTRUMENTS—Continued.

Distance

Opposed contacts
158 Beam-trammel type
159 Screw adjustment,
160 Pivoted trammel,
161 Extensible-rule type,
162 Adjustable wedge,
163 Screw adjustment
164 Micrometer
165 Preliminary setting,
166 Particular indicator,
167 Attachments.
168 Fixed,
169 Single or offset contact
170 Screw adjustment
171 Pivotal,
172 Dial
173 Attachment type.
174 **Gauges**
175 Conformator
176 Flexible band,
177 Curve-ruler type,
178 Circular size
179 Flexible band,
180 Collocating
181 Machine parts
182 Rolls,
183 Typewriter,
184 Watch,
184.5 Printing members
184.6 Hand stamp,
185 Tool
186 Shears,
187 Clapboard,
188 Shingle,
189 Point markers
190 Button or buttonhole,
191 Center,
192 Proportional,

33. GEOMETRICAL INSTRUMENTS—Continued.

Gauges

193 Axle,
194 Door and window,
195 Hoof,
196 Millstone,
197 Mortise,
198 Paper tearing,
199 Screw thread,
200 Spectacle,
201 Tool
202 Saw,
203 Wheel,
204 **Direction indicators**
205 Bore-hole type
205.4 With congealing or solidifying substance,
205.5 Recording
205.6 Etching or marking fluid,
206 Levels and plumbs
207 Special supports,
208 Folding and extensible,
209 Liquid column,
210 Compound bubble and pendulum,
211 Bubble
212 Multi-indicating bubble,
213 Adjustable
214 Adjusting means,
215 Pendulum
216 Bob type
217 Reel feature,
218 Adjustable
219 Adjusting means,
220 Checking feature,
221 Securing feature,
222 Magnetic compasses
223 Liquid,
224 Deviation compensators,
225 Deviation preventers,
226 Gyroscopic compasses.

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS

1 Material subjected to electrical energy.
2 Feather treating.

Processes

3 Hair on head,
4 With selected radiant energy,
5 With freezing, congealing or thickening,
6 Sheet or web contact preventing by spacer sheets, webs or strands,
7 Retarding treating action by shielding,
8 With centrifugal force,
9 With contacting of material treated with liquids or solids,
10 With fluid current conveying or suspension of treated material,
11 With treated material recirculation,
12 With operation on treated material other than drying
13 With cooling,
14 With mechanical liquid removal,
15 With vacuum and/or gas or vapor pressure varying or control and/or fluid sealing
16 Sheets, webs or strands,
17 Diverse types of drying operations
18 Sheets, webs or strands,
19 Combined,
20 Cooling by gas or vapor contact,
21 Hollow articles and/or forms,
22 Gas or vapor contact with material treated
23 Sheets, webs or strands
24 With spacing, rolling or coiling,
25 Material speed, thickness or quantity control,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Processes

Gas or vapor contact with material treated
26 Temperature control or varying and treatment of gas or vapor
27 Vapor removal from gas,
28 With treated material motion,
29 Gas or vapor flow directing or control,
30 Temperature control or varying
31 With treated material motion,
32 Treatment of gas or vapor,
33 With treated material motion,
34 Gas or vapor flow directing or control,
35 Heat conserving,
36 Special gas or vapor
37 Vapors,
38 Piling or arranging material treated,
39 Radiant or conducted heating
40 With evolved gas or vapor treatment,
41 Sheets, webs or strands,
42 Miscellaneous.

Apparatus

43 With automatic control
44 Of plural operations
45 Of operation sequence,
46 Of heater, contacting gas humidity and/or gas mixing,
47 Of gas mixing,
48 Of heater
49 By web or strand tension or breaking,
50 Of contacting gas humidity,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

With automatic control
51 Of gas or vapor pressure in treating enclosure,
52 Of rate of treated material motion,
53 Of time period,
54 Of flow of gas or vapor treating fluid,
55 Of starting and/or stopping,
56 Of treated material feeding and/or discharging,
57 With fluid current conveying of treated material,
58 With apparatus using centrifugal force
59 Rotary scattering member,
60 For diverse operations on treated material
61 With two or more non-drying means,
62 With treated material cooling means
63 Internal rotary drum drier,
64 Gravity flow type drier
65 With integral cooling chamber or section,
66 Cooler chamber integral with or similar to drier,
67 Atmospheric,
68 Diverse heater types and/or gas or vapor contact types only,
69 Diverse types of liquid removers only
70 With expressing or wringing,
71 With means to remove liquids from treated material by contact with solids,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

72 With means to treat gas or vapor
73 By vapor condensation
74 With other gas or vapor treatment,
75 Direct contact with cooling substance,
76 With forced circulation
77 Recirculation of treating gas or vapor,
78 Recirculation of treating gas or vapor,
79 Separation of substances from treating or exhaust gases or vapors
80 By absorbent
81 In or forming walls, ceiling or floor,
82 By filter,
83 Jet devices
84 Gas or vapor circulators or flow promotors,
85 With apparatus cleaner and/or escaping material collector,
86 With waste gas, heat and/or power conservers,
87 With means to interlock operable elements,
88 With display, inspecting or illuminating means,
89 With indicating or testing means,
90 Combined,
91 Convertible,
92 Vacuum,
93 Solar,
94 Sheet or web contact preventing by spacer sheets, webs or strands,

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Apparatus

95 Means to remove liquids from treated material by contact with solids,
96 For hair on head
97 With gas or vapor flow for contact
98 Plural distributors,
99 Head conforming distributor
100 Recirculation of treating gas or vapor,
101 With hair supports,
102 Treated material recirculating means,
103 Forms,
104 For hollow articles
105 With conveying or handling means,
106 With suspension means and bottom retainer,
107 For slender rigid articles,
108 Rotary drums or receptacles
109 Compartmented or pocketed,
110 External
111 With belt or felt drier,
112 With hopper feed or article securing means,
113 Plural
114 Gas or vapor circulation for contact with treated material
115 Through material or introduction through drum,
116 With belts or felts
117 With threading, stripping or guiding devices,
118 Tightener,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Rotary drums or receptacles
External
Plural
119 Heat-exchange-fluid supply and/or removal,
120 Threading, stripping, or guiding devices,
121 Mounting and/or driving means,
122 Gas or vapor circulation for contact with treated material,
123 With belts or felts,
124 Heat-exchange-fluid supply and/or removal
125 Removal only,
126 With additional translating means,
127 Plural
128 One within another (e. g., nested),
129 With feed from one to another,
130 With gas or vapor flow for contact with treated material
131 Recirculation of treating gas or vapor,
132 With heating means
133 With drum or receptacle inclosing housing,
134 Heat exchange and/or gas or vapor conducting conduits in drum or receptacle,
135 Axial treated material feed type
136 Concurrent gas or vapor flow only,
137 Counter-current gas or vapor flow only,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Rotary drums or receptacles
With gas or vapor flow for contact with treated material
138 Gas or vapor conducting conduits in drum or receptacle,
139 With drum or receptacle enclosing housing,
140 Vapor exhaust
141 Axial treated material feed type,
142 Axial treated material feed type,
143 Stationary press type
144 Plural press units,
145 Gas or vapor circulation for contact with treated material,
146 Non-planar press couples,
147 Spiral treated material path type.
148 Sheet, web or strand
149 Sheet elevator type,
150 Sheet on edge,
151 For flexible sheets, webs or strands
152 Running lengths
153 Winding reels,
154 Plural webs or strands,
155 With gas or vapor circulation for contact with treated material
156 Fluid current support or guide,
157 Suspended loops,
158 With edge holding means,
159 With zigzag runs of treated material,
160 Elongated, thin gas or vapor stream,
161 With zigzag runs of treated material,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Sheet, web or strand
For flexible sheets, webs or strands
162 Endless conveyors or movable grippers,
163 Movable treated material holders,
164 Treated material vibrating type,
165 Gravity flow type
166 Trough or tube, with axially rotary conveyor or agitator,
167 Plural gravity path, plural feed and/or discharge,
168 With gas or vapor flow for contact with treated material
169 Recirculation of treating gas or vapor,
170 Inverted imperforate ducts,
171 Shelf to shelf or zigzag treated material flow
172 Dumping shelves or pockets,
173 Rotary stirrer or shelf,
174 Foraminous distributors or walls,
175 With venting means or wall,
176 With treated material tubes,
177 With heating tubes,
178 Shelf to shelf or zigzag treated material flow,
179 Stationary receptacle or tube with agitator or conveyor
180 Plural units,
181 With gas or vapor flow for contact with treated material
182 Axial treated material feed type.

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Stationary receptacle or tube with agitator or conveyor
183 Axial treated material feed type,
184 Rotary or swinging carrier or rack
185 With agitating means or discharging scrapers,
186 Plural rotary or swinging units,
187 With gas or vapor circulation for contact with treated material
188 Air scoops and/or suspended treated material supports,
189 Elevator type
190 Plural,
191 Reversible or pulsating treating gas or vapor flow,
192 Removable shelf or tray type
193 Plural non-vertically aligned,
194 With shelf or tray handling means,
195 With gas or vapor circulation for contact with treated material
196 Recirculation of treating gas or vapor,
197 With heater
198 With liquid heater or vaporizer,
199 Zigzag treating gas or vapor flow
200 With liquid heater or vaporizer,
201 Houses, kilns and containers

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Houses, kilns and containers
202 Article inserted type,
203 With conveyors providing plural or zigzag treated material paths
204 Separable truck or tray,
205 Plural independent paths for treated material,
206 Pusher type,
207 Plural run endless conveyor,
208 Single run endless, both courses carrying treated material,
209 Plural treating units or compartments
210 With gas or vapor circulation for contact with treated material
211 Superposed floors or chambers,
212 Recirculation of treating gas or vapor
213 Parallel circulation only,
214 Parallel circulation only,
215 With heater
216 With conveyor and/or movable treated material support,
217 With conveyor and/or movable treated material support,

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Houses, kilns and containers
218 With gas or vapor circulation for contact with treated material
219 Recirculation of treating gas or vapor
220 Caused by heater action only,
221 Caused by jet action,
222 Movable gas or vapor distributor,
223 Plural gas or vapor forcing means,
224 Plural gas or vapor inlets and/or outlets
225 In wall, ceiling or floor,
226 Tortuous gas or vapor path,
227 Gas or vapor flow toward or from treated material entrance or exit
228 Counter-current to treated material motion only,
229 Movable gas or vapor distributor,
230 Plural gas or vapor forcing means,
231 Deflecting baffle in treating chamber,
232 Plural gas or vapor inlets and/or outlets

34. DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS—Con.

Apparatus

Houses, kilns and containers
With gas or vapor circulation for contact with treated material
Plural gas or vapor inlets and/or outlets
233 In wall, ceiling or floor,
234 Caused by heater only,
235 With venting means,
236 Treated material handling or conveying,
237 Trays or floors
238 Single or plural trays only,
239 Supports
240 Rods or rolls,
241 Gas or vapor distributing and applying agitators,
242 Chamber seals,
243 Miscellaneous.

35 EDUCATION.

1 **Miscellaneous.**
2 **Crytography**
3 Mechanisms
4 Electrical.
5 **Keyboard**
6 With display.
7 **Plans and charts.**
8 **Teaching**
9 Question and hidden answer,
10 Science and mechanics
11 Vehicle operation
12 Aircraft,
13 Engines and machines,
14 Signaling,
15 Textiles,
16 Architecture,
17 Surgery,
18 Chemistry,
19 Physics,
20 Biology and taxidermy,
21 Social science
22 Psychology,
23 Religion and morality,
24 Economics and business,
25 War,
26 Drawing, painting, and sculpturing
27 Designing,
28 Changeable objects and pictures,
29 Physical culture,
30 Mathematics
31 Arithmetic
32 Counters
33 Abacus,
34 Geometry,

35. EDUCATION—Continued.

Teaching
35 Language
36 Writing
37 Guides
38 For the blind,
39 Reading indicating instruments,
40 Geography
41 Relief maps,
42 Segmental and sectional maps,
43 Astronomy
44 Charts,
45 Tellurions,
46 Globes
47 Sidereal or celestial,
48 Examination devices and methods.
49 **Article and surface demonstration**
50 Intercomparison,
51 Interior view,
52 Manufacturing stages,
53 Changeable model,
54 Charts,
55 Material,
56 Garment
57 Boot and shoe,
58 With mirror,
59 Toiletry.

Elements
60 Furniture,
61 Erasable surfaces
62 Combined,
63 Specially mounted,
64 Folding,
65 Frames,
66 Of special materials,
67 Chalk and eraser rails,
68 Compositions,
69 Blocks and cards
70 Number,

35. EDUCATION—Continued.

Elements
Blocks and cards
71 Alphabet and word,
72 Geometrical form,
73 Assembly devices,
74 Discs,
75 Slides,
76 Movable bands,
77 Rollers.

36 BOOTS, SHOES, AND LEGGINGS.

1 **Miscellaneous.**
1.5 **Boots or shoes and detachable leg covers.**
2 **Leggings and gaiters.**
2.5 **Boots and shoes**
2.6 Heated.
3 Ventilated,
4 Rubber,
4.5 Snowshoes
9 Felt and fabric,
7.1 Overshoes
7.2 Heelless,
7.3 Rubber
7.4 Heelless,
7.5 Sandals
7.6 Antislipping
7.7 Heelless,
7.8 Spring.
8.1 Bathing,
8.2 Burial,
8.3 Dancing,
8.4 Fitting,
8.5 Orthopedic,
11 Moccasins,
11.5 Sandals.

36. BOOTS, SHOES, AND LEGGINGS—Continued.

10 **Inside slippers.**
12 **Sole-attaching means**
13 Wooden soles,
14 Rubber,
15 Detachable soles,
16 Outturned uppers,
17 Welt connected,
18 Single-faced stitch,
19 Through and through,
21 Seams,
22 Prepared soles,
23 Fasteners
24 Peg.
24.5 **Interfitted sole and heel.**
25 **Soles**
26 Fleeced slipper,
27 Spring heel,
28 Cushion
29 Pneumatic.
30 Laminated,
31 Sectional,
32 Rubber,
33 Wooden.
34 **Heels**
35 Cushion
36 Detachable,
37 Internal cushion,
38 Metallic spring,
39 Rotary,
40 Metallic shell
41 Detachable,
42 Detachable.
43 **Insoles**
44 Laminated.
45 **Uppers**
46 Corded,
47 Blanks

36. BOOTS, SHOES, AND LEGGINGS—Continued.

Uppers
- Blanks
- 48 Integral vamp and quarters,
- 49 Seamless,
- 50 Closures
- 51 Elastic,
- 52 Buttonhole pieces,
- 53 Slit stays,
- 54 Tongue pieces,
- 55 Linings,
- 56 Pulls,
- 57 Seams, stays, and pipings,
- 58 Metallic seam stiffener.

58.5 **Boot and shoe retaining**
- 58.6 Heel engaging.

68 **Counter stiffeners.**
69 **Counter and heel supports.**
71 **Pads and foot supporters.**
76 **Shanks.**
77 **Toe caps and tips.**
78 **Welts and rands.**
59 **Antislipping devices**
- 61 Disengaging,
- 62 Detachable
- 64 Clamping
- 65 Screw,
- 66 Attached fasteners,
- 67 Calks.

70 **Garment protectors.**
72 **Protectors**
- 73 Sole and heel
- 74 Spur attached,
- 75 Embedded.

37 EXCAVATING.

1 **Miscellaneous.**
2 **Stump and stone removers.**
3 **Peat excavators.**
4 **Self-loading vehicles**
- 5 Snow
- 6 Railway,
- 7 Endless floor,
- 8 Endless conveyor,
- 9 Elevating wheel.

10 **Snow compressor**
- 11 Heater.

12 **Snow excavators and melters**
- 13 Road former,
- 14 Railway
- 15 Plow,
- 16 Hand operated.

17 **Railway snow excavators**
- 18 Explosion,
- 19 Fluid-current conveyor,
- 20 Rotary excavator
- 21 Longitudinal axis
- 22 Twin excavator,
- 23 Auxiliary rotary excavator,
- 24 Transverse axis
- 25 Auxiliary conveyer,
- 26 Vertical axis
- 27 Auxiliary conveyer,
- 28 Scoop and conveyer,
- 29 Plow or scraper
- 30 V-shaped
- 31 With rotary excavator,
- 32 Inclined plane with V divider
- 33 Switch,
- 34 Plural,
- 35 Diagonal blade,
- 36 Rail
- 37 Third rail,

37. EXCAVATING—Continued.

Railway snow excavators
- Plow or scraper
- Rail
- 38 Rotary cutter
- 39 Plow,
- 40 Hand operated.

41 **Roadway snow excavators**
- 42 Automobile
- 43 Rotary,
- 44 V plow,
- 45 Conveyer,
- 46 V plow
- 47 Pusher,
- 48 Diverging forwardly,
- 49 Inclined plane with V divider,
- 50 Diagonal blade
- 51 Track clearer
- 52 Rut cutter,
- 53 Hand operated.

54 **Dredgers**
- 55 Shellfish,
- 56 Submarine chamber,
- 57 With screen,
- 58 Suction
- 59 Vacuum pump,
- 60 Endless bucket,
- 61 With jet pump
- 62 Jet digger,
- 63 With jet digger,
- 64 Rotary digger
- 65 Vertical axis,
- 66 Transverse axis,
- 67 Longitudinal axis,
- 68 Suction-current operated,
- 69 Endless bucket,
- 70 Excavating wheel,
- 71 Scoop,
- 72 Pipe supports and couplings,
- 73 Bottom spud anchor,

37. EXCAVATING—Continued.

Dredgers
- 74 Bank spud anchor,
- 75 Scouring
- 76 Digger
- 77 Rotary,
- 78 Jet,
- 79 Current deflector.

80 **Ditchers**
- 81 Screw
- 82 Conveyer,
- 83 Endless bucket
- 84 Railway,
- 85 Transverse cut,
- 86 Longitudinal cut
- 87 Rotary digger,
- 88 Reciprocating digger,
- 89 Longitudinal endless conveyer,
- 90 Transverse endless conveyer,
- 91 Wheel excavator
- 92 Longitudinal axis
- 93 Conveyer,
- 94 Transverse axis
- 95 Conveyer
- 96 Longitudinal endless,
- 97 Transverse endless,
- 98 Plow
- 99 Conveyer
- 100 Wheel and belt,
- 101 Longitudinal endless
- 102 Transverse endless,
- 103 Shovel or scoop.

104 **Railway graders**
- 105 Side former
- 106 Scoop
- 107 Endless conveyer.

108 **Road-grader type**
- 109 Transverse endless scraper or bucket,

37. EXCAVATING—Continued.
Road-grader type
Plow
110 Transverse endless conveyer,
Conveyer wheel
111 Transverse axis
112 Transverse endless conveyer,
113 Vertical axis,
114 Inclined axis,
115 Cable operated
116 Boom type,
117 Trolley supported,
118 Scoops
119 Shellfish,
120 Fork or rake
121 Wheeled,
122 Sledded
123 Snow,
124 Wheeled
125 Cable operated,
126 Four wheel
127 Plural scoop,
128 Rear gate,
129 Two wheel
130 Hand operated,
131 Caster wheel or shoe,
132 Vehicle actuated,
133 Rear gate,
134 Lever and latch,
135 Cable operated
136 Valved,
137 Handled
138 Pivot and latch
139 Reversible,
140 Dumping runner,
141 Digging edge
142 Teeth.

37. EXCAVATING—Continued.
143 Scrapers
144 Ditch filler,
145 With harrow,
146 With roller,
147 Cable operated,
148 Sledded
149 Snow,
150 Wheeled,
151 Duplicate drag
152 Wheeled,
153 Four-wheeled
154 V diverging forwardly,
155 Diagonal blade
156 Annular blade support
157 Axle adjuster,
158 Axle adjuster,
159 Arc blade support,
160 Two-wheeled
161 Caster wheel or shoe
162 V diverging forwardly,
163 Diagonal blade
164 Annular blade support,
165 Transverse blade,
166 Vdiverging forwardly,
167 V converging forwardly,
168 Diagonal blade,
169 Transverse blade,
170 V diverging forwardly,
171 V converging forwardly
172 Wheeled,
173 One side as runner
174 Wheeled,
175 Parallel blade
176 Wheeled,
177 Diagonal blade
178 Wheeled,
179 Transverse blade
180 Wheeled,

37. EXCAVATING—Continued.
Scrapers
181 Wheeled.
182 Orange-peel buckets.
183 Clamshell buckets
184 Common pivot
185 Crossed lever,
186 Contiguous pivots,
187 Spaced pivots,
188 Link connected.
189 Rotary digger
190 Endless conveyer.
191 Endless digger
192 Endless conveyer,
193 Mole plows.
194 Sawmill-carriage wheel guards.
195 Processes.

38 TEXTILES, IRONING OR SMOOTHING.

1 Smoothing machines
2 Combined
3 Moistener,
4 Multiple
5 Cooperative platen elements only,
6 Different pressers with common smoother element,
7 With article transfer device
8 Conveyor belt
9 Conveyor belt between opposed elements
10 Platen elements,
11 Conveyor belt opposed to single smoother,

38. TEXTILES, IRONING OR SMOOTHING—Continued.
Smoothing machines
12 With clamping or stretching
13 And neck band engaging,
14 With fluid flow to or through the work
15 Platen type
16 Platen structure,
17 Platen presser
18 Rotary presser,
19 Stacked platens,
20 Sectional press platen,
21 Having three or more press elements
22 Sequentially usable
23 Reciprocable press platen,
24 Selectively usable,
Having two press platens
25 Head and bed movable
26 Reciprocable head or bed,
27 Head or bed movable
28 Reciprocably
29 With intermediate textile roll,
30 Horizontally and vertically
31 Power operated,
32 Pivotally and horizontally
33 Power operated,
34 Pivotally and vertically
35 Power operated,
36 Pivotally
37 Power operated
38 Electric motor
39 2-step,
40 Fluid motor
41 2-step,
42 Horizontally,
43 Vertically,

38. TEXTILES, IRONING OR SMOOTHING—Continued.

Smoothing machines

44 Roller presser
45 With reciprocable element
46 Reciprocable roll,
47 Reciprocable bed,
48 Four or more coplanar axes,
49 With plural cooperating rolls
50 One aproned roll,
51 One textile carrying roll,
52 With single cooperating pressing roll
53 Textile carrying roll,
54 With plural cooperating pressing beds
55 Plural roller pressers,
56 With single cooperating pressing bed
57 Plural roller pressers,
58 Roller translated
59 Power translation,
60 Bed translated
61 Power translation,
62 Textile roll,
63 Elements
64 Work supports,
65 Presser rolls and covers,
66 Platens or beds and covers,
67 Strippers,
68 Aprons.
69 **Smoothing implements**
70 Smoothing and stretching devices,
71 Platen presses
72 Stacked platens,
73 Wrapping devices,
74 Flat irons
75 Combined

38. TEXTILES, IRONING OR SMOOTHING—Continued.

Smoothing implements

Flat irons
Combined
76 With roller presser element,
77 With moistening
78 Liquid,
79 With support,
80 Reversible pressing surfaces,
81 Detachable pressing surface,
82 Heating
83 Additive hot solid,
84 Hot fluid
85 Steam,
86 Fuel
87 Solid,
88 Body structure
89 Heat insulation,
90 Handles
91 Detachable handle and shell,
92 Detachable handle,
93 Sole surface,
94 Attachments
95 Hand shields and grips,
96 Supports,
97 Shoes,
98 Weight increasers,
99 Stationary non-planar pressing surface,
100 Roller
101 Opposed rolls,
102 Stretchers.
103 **Ironing tables**
104 Combined
105 With table,
106 With rack,
107 With flat iron support,

38. TEXTILES, IRONING OR SMOOTHING—Continued.

Ironing tables

Combined
108 With clamp or stretcher
109 And neck band shaper,
110 With neck band shaper,
111 With fabric support,
112 Convertible
113 To table,
114 Supports
115 Board detachable,
116 Having front and rear legs
117 Hinged to the board
118 One hinge slidable,
119 Coaxial pivotal connection to the board,
120 Crossed legs
121 One hinge slidable,
122 One, only, hinged to the board
123 Crossed legs,
124 Single leg,
125 Auxiliary support
126 Wall, door or cabinet
127 Hinged and slidable,
128 Hinged, vertical pivot,
129 Hinged,
130 Shelf, table or ironing board
131 Clamped
132 Clamping leg,
133 Leg operated clamp,
134 Hinged,
135 Plural pressing surfaces
136 Invertible boards,
137 Single pressing surface
138 Sectional boards
139 Hinged boards,
140 Covers or cover securing means.

38. TEXTILES, IRONING OR SMOOTHING—Continued.

141 **Accessories**
142 Flat iron stands, combined,
143 Sheet shake out or spreader devices.
144 **Pressing or smoothing processes.**

39 GATES.

1 **Miscellaneous.**
2 **Successive barrier**
3 Turnstiles.
4 **Flood**
5 **Flush**
6 With operator.
7 **Motor driven**
8 Fluid-pressure motor.
9 **Mechanically operated**
10 Compound,
11 Multiple movement
On vertical pivot
12 With horizontal translation and vertical adjustment,
13 And series of horizontal pivots,
14 With vertical adjustment,
15 And on horizontal pivot,
16 With horizontal translation,
17 Automatic return
18 Load restrained,
19 Track guard
20 Double acting,
21 Lateral barrier,
22 Vertically pivoted
23 With weight,
24 Horizontally pivoted,
25 Horizontal translational movement,
Gate and latch
26 Gate folding on vertical pivots,
27 Gate folding on horizontal pivots,
28 Gate vertically pivoted
29 Interconnected,
30 Pivot intermediate,
31 Gravitational,

39. GATES—Continued.
Mechanically operated
Gate and latch
Gate vertically pivoted
32 Hinge-stile operated
33 Geared,
34 Sheaved,
35 Crank arm,
36 Rear extension,
37 Intermediately connected operator
38 Lever
39 Toggle,
40 On hinge post,
41 Flexible,
42 Gate horizontally pivoted
43 Pivot transverse
44 With weight,
45 Gate having translational movement
46 Curvilinear,
47 Interconnected,
48 Operator connected at ends,
49 Folding on vertical pivots,
50 Folding on horizontal pivots,
51 Vertically pivoted
52 Interconnected,
53 Pivot intermediate,
54 Jump,
55 Gravitational
56 Movable pivot
57 Lever on hinge post,
58 Intermediately connected operator
59 Toggle,
60 Horizontally pivoted
61 Interconnected
62 Bar,

39. GATES—Continued.
Mechanically operated
63 Translational movement
64 Curvilinear,
65 Horizontal
66 Interconnected,
67 Gravitational
68 Sectional track,
69 Bar and wheel moved,
70 Operator connected at ends,
71 Lever operator
72 Loosely connected,
73 Toggle,
74 **Tension.**
75 **Compound.**
76 **Multiple movement**
On two axes
77 With horizontal translation,
78 With vertical adjustment,
On vertical axis
79 With horizontal translation and vertical adjustment,
80 And series of horizontal pivots,
81 With vertical adjustment,
82 And on horizontal pivot,
83 With horizontal translation.
84 **Automatic return.**
85 **Folding on vertical pivots.**
86 **Folding on horizontal pivots.**
87 **Vertically pivoted.**
88 **Horizontally pivoted**
89 Picket shaft,
90 Falling panel,
91 Pivot transverse
92 Bar.
93 **Translational**
94 Curvilinear,
95 Horizontal.
96 **Front-end supports.**

40 CARD, PICTURE, AND SIGN EXHIBITING.

1 **Exhibitors.**
1.5 **Badges**
1.6 Changeable reading.
124.1 **Display cards.**
124.5 **Memorial tablets.**
2 **Checks, labels, and tags**
2.2 Permanent identification devices,
3 Animal markers,
4 Bottle,
7 Display-box labels,
8 Door knob and drawer pull,
9 Hat,
5 Changeable reading
6 Baggage checks,
27 Reinforced,
10 Holders
10.5 Telephone attachments,
12 Cornice,
11 Clip,
13 Hinged clamp,
14 Hinged clamp and spur,
15 Lock,
16 Slide,
17 Slide and detent
18 Limited movement,
19 Tubular,
19.5 Check boards or racks,
20 Fasteners
21 Band,
22 Barbed,
23 Clasp,
24 Pin loop,
25 Spur,
26 Spring hook.
107 **Calendars**
109 Charactered slide,
110 Character markers,

40. CARD, PICTURE, AND SIGN EXHIBITING—Continued.

Calendars
111 Rotatable
112 Clutch take-up,
113 Disk,
114 Single axis
115 Disk,
116 Single reel and web,
117 Double reel and web,
118 Endless,
119 Hinged leaves,
121 Tear-off tablets,
122 Card pockets,
120 Stands,
108 Pencil attachments.
28 **Changeable exhibitors**
105 Train-order holders,
29 Aerostatic,
52 Electrically controlled
53 Electromotor operated,
54 Magneto-clutch let-off,
55 Magneto-clutch take-up,
56 Obstacle - controlled circuit closers
57 Electromotor operated,
58 Magneto-clutch let-off,
59 Magneto-clutch take-up,
30 Motor operated
31 Double reel and web,
32 Endless,
33 Rotatable
34 Disk,
35 Hinged leaves,
36 Shifters,
37 Fluid operated
38 Double reel and web,
39 Rotatable
40 Illuminated,

40. CARD, PICTURE, AND SIGN EXHIBITING—Continued.

Changeable exhibitors

41 Axle operated
42 Double reel and web,
44 Endless,
44 Rotatable,
45 Obstacle operated
46 Double reel and web
47 Clutch take-up,
48 Endless,
49 Rotatable,
50 Shifters,
51 Pendulum operated,
60 Door operated,
61 Inscription covers
62 Sliding,
63 Interchangeable, plates
64 Sliding,
65 Sliding plates
66 Bolt operated,
67 Pivoted plates,
68 Rotatable
69 Clutch take-up,
70 Disk
71 Clutch take-up,
72 Hinged leaves
73 Clutch take-up,
74 Radially movable leaves
75 Clutch take-up,
76 Multiple-drum controllers,
77 Illuminated,
78 Shifters
79 Reciprocating,
80 Revolving,
81 Revolving pack case,
82 Single reel and web
83 Reel cabinets
84 Revolving,
85 Spring rewind,

40. CARD, PICTURE, AND SIGN EXHIBITING—Continued.

Changeable exhibitors

86 Double reel and web
87 Clutch take-up
88 Reversible-clutch,
89 Spring rewind
90 Clutch take-up,
91 Clutch let-off
92 Obstacle trip,
93 Reversing gears
94 Clutch take-up,
95 Intergeared reels,
96 Endless
97 Hinged leaves,
98 Radial leaves,
99 Clutch take-up,
100 Folding web and reel
101 Clutch take-up,
102 Hinged leaves
103 Leaf releasers,
104 Leaf turners,
106 Couplings.
125 **Signs**
126 Dummies,
127 Aerostatic,
127.1 Skywriting,
130 Illuminated
131 Lamp attachments,
132 Lamp boxes
133 Perforated face,
134 Luminous paint,
138 Vibratory
139 Motor operated,
135 Multiple layer,
136 Embossed, molded, rolled, or stamped,
137 Variable reading,
128 Hanging,
129 Portable,

40. CARD, PICTURE, AND SIGN EXHIBITING—Continued.

Signs

140 Interchangeable letters
141 Glass,
142 Fasteners
143 Prong,
144 String,
145 Post attachments.
124 **Card racks.**
152 **Picture frames**
152.1 With supports
152.2 Illuminated,
153 Cord or wire,
154 Embossed, molded, rolled, or stamped,
155 Extensible, folding, or knock-down,
156 Card or picture retainers,
157 Cover retainers,
158 Mats, mounts, and backs
159 Pocketed,
160 Relief picture.

41 ORNAMENTATION.

1 **Apparatus and appliances**
2 Imitation-flower making
3 Stems and vines,
3.5 Stencil making,
4 Painters'
4.5 Shading films or holders,
5 Palettes and mixing plates,
5.5 Graining,
6 Mixing charts,
7 Metallic-leaf applying,
9 Etching.
10 **Ornamental forms**
11 Collapsible,
12 Floral,
13 Imitation flowers
14 Special feature,
15 Imitation trees,
16 Imitation feathers.
17 **Surface type**
18 Miscellaneous metallic,
19 Striated effects.
20 Transformation effects,
21 Diaphanous,
22 Diaphanous face, opaque backing,
23 Mosaic,
24 Relief and intaglio
25 Reproducing
25.5 Preparing make-readys,
26 Pigment
27 Treating photographs
28 Clearing feature,
29 Masking,
30 Filled recesses
31 Applied outlines,
Copying
31.6 Surfaces or compositions,
32 Plaques and surfaces,
33 Transfers,

41. ORNAMENTATION—Continued.
Surface type
34 Applied objects
35 Inlaid,
36 Particles,
37 Metallic leaf,
38 Removing portions of coating
38.5 Stencil making
38.6 Sheets or compositions,
39 Abraded and roughened
40 Chipping with adhesive,
41 Chemical
41.5 Planographic printing surface,
42 Etching
43 Resist preparation,
45 Designs without resist,
46 Mechanical negatives.

42 FIREARMS.

1 **Miscellaneous.**
52 **Cane guns.**
53 **Pistol swords.**
54 **Toy**

57 Ribbon fed,
58 Revolvers,
55 Cannon.

2 **Breech loading**
Automatic
3 Gas operated,
4 Recoil operated,
5 Spring-motor operated,
8 Breech hinged barrel,
9 Faucet breechblock,
10 Forward-sliding barrel
11 Magazine,
12 Side swinging barrel
13 Parallel pivot,
14 Sliding breechblock
15 Magazine,
16 Rearward
17 Magazine
18 Box,
19 Rotary,
20 Pivoted hammer
21 Magazine
22 Box,
25 Extractors,
23 Vertical mortise
24 Magazine,
26 Swinging breechblock
27 Magazine,
28 Downward and rearward
29 Magazine,
30 Laterally forward,
31 Laterally rearward,

42. FIREARMS—Continued.
Breech loading
Swinging breechlock
32 Parallel pivot
33 Magazine,
34 Rearward and downward
35 Magazine,
36 Upward and forward
37 Magazine,
38 Upward and rearward
39 Magazine,
40 Upward-tilting breech
41 Locks
42 Single trigger,
43 Cocking devices,
44 Barrel locks
45 Hammer cocking,
46 Extractors,
47 Ejectors
48 Hammer,
7 Grip magazine pistols,
6 Magazine,
49 Magazines
50 Box.
51 **Muzzle loaders.**
59 **Revolvers**
60 Magazine-fed cylinder,
61 Muzzle loaders,
62 Swinging cylinder,
63 Hinged barrel
64 Barrel catches,
65 Locks
66 Safety devices,
67 Cylinder stops,
68 Shell extractors,
69 **Locks**
70 Safety.
71 **Stocks**
72 Auxiliary,
73 Adjustable,

42. FIREARMS—Continued.
Stocks
74 Cushioned,
75 Stock and barrel fastenings.
76 **Barrels**
77 Auxiliary,
78 Rifling,
79 Choke devices.
83 **Nipples and guards.**
84 **Electric appliances.**
85 **Gun trimmings.**
86 **Bayonets.**
87 **Magazine chargers**
88 Packs
89 Revolver.
90 **Implements**
91 Cleaning
92 Rod joints,
93 Intrenching,
94 Rests,
95 Shell extracting.

43 FISHING, TRAPPING, AND VERMIN DESTROYING.

1 **Miscellaneous.**

2 **Decoys**
3 Duck.

4 **Fishing**
5 Fish grapples and gaff hooks,
6 Harpoons and spears,
7 Nets
8 Handling apparatus,
9 Trawl,
10 Gill,
11 Dip.
12 Foldable,
13 Fish wheels.
14 Seines,
15 Automatic hookers or catchers
16 Signaling,
17 Signal devices,
18 Rods
19 Casting,
20 Reel section
21 Motor operated,
22 Reel mounts,
23 Butts,
24 Line guides or tips,
25 Attachments,
26 Cases,
27 Hooks and tackle
28 Attaching devices,
29 Disgorgers and gags,
30 Releasing devices,
31 Holders
32 Fly and hook,
33 Rod attachment,
34 Trap hooks
35 Artificial bait,
36 Expanding,
37 Pull actuated,

43. FISHING, TRAPPING, AND VERMIN DESTROYING—Con.

Fishing
Hooks and tackle
38 Guards
39 Artificial bait,
40 Bait holders or retainers
41 Inclosing,
42 Artificial bait
43 Motor operated,
44 Luminous,
45 Spinning,
46 Minnows
47 Spinning,
48 Insects,
49 Floats
50 Net,
51 Line holding,
52 Sinkers
53 Net,
54 Attached hooks,
55 Catch or bait holders,
56 Minnow buckets
57 Aerating pump.

58 **Traps**
59 Burglar,
60 Imprisoning
61 Swinging or sliding closure,
62 Falling engaging member,
63 Jaw-cage type,
64 Self and ever set
65 Nonreturn entrance
66 Victim opened,
67 Victim closed,
68 Sinking compartment,
69 Tiltable platform
70 Trigger released,
71 Rotatable platform
72 Trigger released,

43. FISHING, TRAPPING, AND VERMIN DESTROYING—Con.

Traps
73 Self-reset
74 Rotating door or platform,
75 Smiting,
76 Victim reset,
77 Impaling or smiting
78 Rectilinear striker movement
79 Impaling
80 Burrow type,
81 Swinging striker
81.5 Auxiliary striker holder,
82 Direct-engaging latch
83 Automatic catch,
83.5 Automatic set,
84 Explosive,
85 Choking or squeezing
86 Movable loops,
87 Constricting noose,
88 Jaw
89 Suspended,
90 Modified jaw
91 Parallel oscillating,
92 Modified trigger mechanism
93 Direct engagement
94 Wedge or toggle,
95 Automatic catch,
96 Attachments
97 Setting,
98 Electrocuting
99 Body removing or concealing,
100 Fish
101 Weirs,
102 Elevatable cage,
103 Portable or floating
104 Towable,
105 Foldable or collapsible,
106 Porpoise,
107 Insect
108 Tree trunk,

43. FISHING, TRAPPING, AND VERMIN DESTROYING—Con.

Traps
Insect
109 Furniture,
110 Operator controlled,
111 Mechanically operated,
112 Electrocuting,
113 Illuminated,
114 Adhesive
115 Fly-paper holders,
116 Flexible, withdrawable section,
117 Upright perch, slidable receptacle,
118 Reticulate fabric,
119 Window, screen, or door,
120 Garbage can,
121 Crawling-insect type,
122 Fly vases,
123 Bedbug type.

124 **Vermin destroying**
125 Fumigators
126 Tree apparatus,
127 Smokers
128 Bee type,
129 Vaporizers
130 Steam,
131 Poison holders,
132 Insect
133 Catchers
134 Implements
135 Spring operated,
136 Adhesive,
137 Swatters,
138 Machines
139 Suction
140 Traveling,
141 Blast,
142 Rotated agitator,
143 Oscillated agitator,

43. FISHING, TRAPPING, AND VERMIN DESTROYING—Contd.

Vermin destroying
Insect
144 Burners,
145 Powder dusters or sprayers
146 Compressible,
147 Blast
148 Rotary blower.

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44 FUEL AND IGNITING DEVICES

1 **Artificial fuel**
2 Apparatus,
3 Chemical-reaction heat producers,
4 Solid fuel combustion aids
5 Flue-cleaning compounds,
6 Coated or impregnated bodies,
7 Solidified liquid,
7.5 Candle compositions,
50 Liquid
51 Emulsions or non-gaseous suspensions in liquids,
52 Normally gaseous material containing
53 Lower alkanol or anhydride thereof containing
54 From partial oxidation of hydrocarbons or hydrogenation of carbon oxides,
55 With resin, rubber, terpene or derivative,
56 With petroleum distillate,
57 With ignition promoter,
58 With lubricant or gum flux,
59 With coloring or identifying agent,
60 With substances formed in situ or by reaction with base,
61 Pitch, tar, or sludge containing,
62 Resin, rubber, terpene or derivative containing,
63 Heterocyclic carbon compound containing,
64 N to N bond containing compound,
65 Anthrone or quinone containing,

44. FUEL AND IGNITING DEVICES—Continued.

Artificial fuel
Liquid
66 Fat, fatty oil, fatty oil acid or derivative,
67 Heavy metal or aluminum containing
68 Organic compound
69 Lead containing,
70 Non-oxo-carbonylic compound containing
71 Nitrogen containing,
72 Nitrogenous compound containing
73 Amino-oxo reaction product,
74 Carbocyclic
75 Oxo or oxy
76 S, Se, Te, Si, P or B containing,
77 Oxo, or oxy compound containing
78 Carbocyclic
79 Halogen containing,
80 With added hydrocarbon other than mineral oil fraction,
10 Briquetting
11 Apparatus
12 Plural operations
13 With molding,
14 Shapes and structures,
Binders
15 Carbon-compound containing
16 With inorganic material
17 With oxidizer,
18 With animal derivative,
19 With bituminous material,
20 With petroleum or its derivative,
21 Resin containing,

44. FUEL AND IGNITING DEVICES—Continued.

Artificial fuel
Briquetting
Binders
Carbon-compound containing
22 With animal derivative,
23 With bituminous material,
24 With petroleum or its derivative,
25 Resin containing,
26 Inorganic material,
27 Peat
28 Apparatus
29 Plural operations
30 With molding,
31 Disintegrating,
32 Briquettes,
33 Heat-including processes.
34 **Fire kindling**
35 Apparatus
36 Automatic
37 Fire engine,
38 Shapes and structures
39 With igniters,
40 Packages,
41 Coated or impregnated bodies.
42 **Matches**
43 Multiple
44 Cards,
45 With scratchers,
46 Splints and sticks,
47 Processes,
48 **Match scratchers.**

45 FURNITURE

Book and music holders
57 Base supported
80 Adjustable,
81 Rotary,
59 Body supported,
60 Bookstands
85 Folding,
86 Leveling,
58 Bracket supported
82 Adjustable,
61 Leaf holders,
83 Leaf rests,
62 Music stands
121 Portable,
64 Portfolio.
5 **Bureaus**
88 Knockdown.
89 **Carpet stretchers.**
68 **Covers**
68.1 Sewing machine and typewriter
68.2 Carrying case,
68.3 Table and counter
68.4 Mats and pads.
6 **Desks**
90 Attachments,
91 Lids
92 Flexible,
69 Portable,
93 Sectional,
70 Table.
7 **Drawers**
77 Guides,
94 Locking devices,
95 Swinging,
96 Tilting.

45. FURNITURE—Continued.

131 **Drawing boards.**
129 Easels,
24 **Fabric-stretching frames**
130 Painters'.
2 **File cabinets**
3 Revolving.
15 **Insect guards.**
139 **Leveling devices.**
22 **Packing furniture.**
137 **Pads and feet.**
71 **Provision safes**
Evaporative
132 External,
133 Internal,
134 Porous wall,
102 Knockdown,
103 Revolving.
105 **Screens**
106 Folding.
28 **Soap holders**
136 Shaving cups.
138 **Upholstery making.**
36 **Wall protectors.**
38 **Washstands**
119 Reservoir.

46 AMUSEMENT DEVICES, TOYS

1 **Miscellaneous.**
2 **Toy money boxes**
3 Coin operated or released figure or mechanism,
4 Coin depositing mechanism,
5 Retracting coin slot mechanism.
6 **Soap bubble devices**
7 With reservoir
8 Power operated.
9 **Smoking devices.**
10 **Sparking.**
11 **Containers.**
12 **Buildings**
13 Toy theatres.
14 **House furnishings**
15 Beds, chairs, tables, and cabinets.
16 **Construction toys**
17 Knockdown toys
18 Toy stores,
19 Houses
20 Log cabins,
21 Sheet material,
22 Figures,
23 Elements
24 Blocks
25 Mating,
26 With connector,
27 Bars and rods
28 Mating,
29 With connector,
30 Sheets
31 With connector.
32 **Toy supports.**
33 **Toy telephones.**
34 **Animated booklet.**
35 **Cards and pictures**
36 Movable
37 Changeable,

46. AMUSEMENT DEVICES, TOYS—Continued.

38 **Confetti devices.**
39 **Machinery**
40 Material handling.
41 **Fluent material operated**
42 Single element.
43 **Marble runways.**
44 **Pneumatic.**
45 **Electric and magnetic.**
46 **Molding devices.**
47 **Spinning and whirling devices**
48 With sparking,
49 With chromatic effects,
50 Gyroscopic,
51 Whirlers
52 Sounding,
53 Air actuated
54 Radiator cap ornaments,
55 Figure operating,
56 Jet operated,
57 Convection operated,
58 Pinwheels.
59 Self-winding spindle,
60 Aerial tops
61 Tethered
62 Cord twist
63 Sounding,
64 Tops
65 Combined
66 With sounding means,
67 With spinning devices
68 Spiral,
69 Spring impellers,
70 Cord impellers.
71 Holding means
72 Separable,
73 Tips and spindles.

46. AMUSEMENT DEVICES, TOYS—Continued.

74 **Aerial**
75 Autogyros and helicopters,
76 Airplanes
77 Tethered,
78 With motor-driven propeller,
79 Gliders
80 With folding wings,
81 With projecting means,
82 Flying propellers
83 With cord impeller,
84 With spring impeller,
85 With spiral impeller,
86 Parachutes.
87 **Inflatable**
88 Combined,
89 Aircraft simulations,
90 Inflating and sealing means.
91 **Aquatic**
92 Figured,
93 Boats
94 Submersible,
95 Jet propelled,
96 Wheeled.
97 **Figure wheeled toys**
98 With sounding means
99 Figure and wheeled support,
100 Low center of gravity,
101 Vehicle and figure
102 Walking figure,
103 Wheeled figure
104 Moving figure
105 Walking,
106 Figure and wheeled support
107 Moving figure
108 Animal and rider,
109 Velocipede pedaling,
110 Walking.

46. AMUSEMENT DEVICES, TOYS—Continued.

111 **Sounding wheeled toys**
112 Combined.,
113 Railway rolling stock,
114 Trundles and hoops.
115 **Figure toys**
116 Combined
117 With sound
118 Movable figure,
119 Movable
120 Combined actions
121 With dancing,
122 Along endless path,
123 Animal figures
124 Birds and insects
125 Radiator cap ornaments,
126 Marionette,
127 Animal and rider,
128 Kicking,
129 Leaping and skipping,
130 Acrobatic
131 Balancing,
132 Climbing,
133 Jumping-jack,
134 Tumbling,
135 Changeable feature,
136 Dancing
137 Movable platform operated,
138 Figure support operated,
139 Link operated,
140 Rotary figure support,
141 Eating and nursing,
142 Fighting
143 Motor operated,
144 Musicians,
145 Projecting
146 Jack-in-the-box,
147 Seesaw, swinging and rocking,
148 Striking,
149 Walking
150 Figure carried motor,

46. AMUSEMENT DEVICES, TOYS—Continued.

Figure toys
151 Forms and dolls
152 Reptiles,
153 Multiple,
154 Hand,
155 Self-righting,
156 Of special material
157 Sheet material,
158 Fabric covered
159 Jointed,
160 With solid parts,
161 Jointed,
162 Bodies and skeletons
163 Limbs.
164 Heads
165 Eyes
166 Movable eyelid,
167 Movable
168 Universal,
169 Horizontal axis,
170 Luminous,
171 Mouth,
172 Wigs,
173 Joints.
174 **Sounding toys**
175 Combined
176 Detonating,
177 Multiple sounders,
178 Air actuated sounder
179 Whistles and sirens,
180 Vibratory reed
181 Horns,
182 Voice actuated diaphragm,
183 Voices
184 Valved
185 Rotary,
186 Pivoted,
187 Reciprocating,
188 Elements,

46. AMUSEMENT DEVICES, TOYS—Continued.

Sounding toys
189 Vibrators
190 Tick-tacks,
191 Percussion
192 Ratchet actuated,
193 Rattles.
194 Film bursters
195 Self-feeding,
196 Detonating
197 Canes
198 Magazine type,
199 Projecting,
200 Projectiles.
201 **Wheeled toys**
202 Combined
203 With illuminating means,
204 With wheel actuated devices
205 Trundles,
206 With driving means
207 Eccentric weight,
208 With motor lock.
209 Inertia,
210 Remote control,
211 Erratic movement,
212 Reversing,
213 Self steering,
214 Dumping,
215 Fire apparatus,
216 Railways
217 Locomotives,
218 Cars,
219 Tractors and tanks,
220 Trundles and hoops.
221 Elements
222 Bodies
223 Demountable.

47 PLANT HUSBANDRY.

1 **Miscellaneous.**
1.1 **Mushroom culture.**
1.2 **Water culture.**
1.3 **Electroculture.**
2 **Frost preventing.**
3 **Celery blanching.**
4 **Hedge training.**
5 **Cotton treating.**
6 **Grafting.**
7 Budding.
8 **Tree surgery.**
9 **Mulching.**
10 **Turpentine and rubber.**
11 Buckets and spouts,
12 Tools.
14 **Seed testers**
15 Roll,
16 With heater.
17 **Greenhouses**
18 Benches.
19 **Hotbeds.**
20 **Tree covers**
21 Single tree
22 With heater.
23 **Tree-trunk guards**
24 Belts,
25 Root.
26 **Plant covers, shades, and screens**
27 With irrigator,
28 Covers
29 Transparent top,
30 Open top,
31 Screen,
32 Root.
33 **Ornamental beds.**
34 **Plant receptacles**
35 Hanging,
36 Window,
37 Transplanting,

47. PLANT HUSBANDRY—Continued.

Plant receptacles
38 With irrigators.
39 **Plant stands**
40 Window.
41 **Flower holders.**
42 **Tree supports**
43 Props.
44 **Plant supports**
45 Cage,
46 Linear,
47 Vertical.
48 **Subsoil irrigators and weed killers**
49 Tools.
50 **Sap buckets**
51 Combined with cover and spout,
52 Spouts
53 With bucket support,
54 Covers.
55 **False stems.**
56 **Seed tapes.**
57 **Miscellaneous machines and tools.**
58 **Miscellaneous processes.**
59 **Plants**
60 Flowers
61 Roses,
62 Fruits.

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48 GAS, HEATING AND ILLUMINATING.

Acetylene

1 Generation and liquefaction,
2 Generator and holder,
3 Generator and mixer,
Generators
4 Water feed
5 Holder operated
6 Series
7 Automatic switch,
8 Cell series,
9 Gasometer and high-pressure holder,
10 Interior valve,
11 Rotary cylinder,
12 Underfeed,
13 Valveless
14 Displacer,
15 Flexible tube,
16 Generator supported,
17 Siphon,
18 Tilting,
19 Ebb and flow
20 Series,
21 Cell series,
22 Concentric,
23 Series,
24 Cells series,
25 Capillary
26 Adjustable,
27 Percolating
28 Pressure valves,
29 Expansible carbid container,
30 Expansible water holder,
31 Inexpansible gas holder and water feed,
32 Oscillating,
33 Rotary cylinder,

48. GAS, HEATING, AND ILLUMINATING—Continued.

Acetylene

Generators
Water feed
34 Rotary grate,
35 Underfeed,
36 Interlocking devices,
37 Pressure valves,
38 Carbid feed
39 Apron or belt,
40 Cock,
41 Dip
42 Cell series,
43 Flap valve,
44 Hand
45 Dip,
46 Measured charges
47 Cartridges,
48 Rotary carrier
49 Vertical,
50 Stationary,
51 Piston,
52 Plate valve,
53 Pop valve
53.1 Bell operated
53.2 Bell and holder combined,
53.3 Diaphragm operated,
53.4 Float operated,
54 Screw,
55 Slide valve,
58 Valves, gas and water feed,
56 Automatic safety escape,
57 Sludge remover,
59 Carbid cartridges
60 Conglomerate.
61 **Generators**
Hydrogen
116 Carbureter
117 Air,

48. GAS, HEATING AND ILLUMINATING—Continued.

Generators

Hydrogen
Carbureter
118 Floating oil,
62 Cupola
71 Coal, oil, and water,
72 Coal and oil,
73 Coal and water,
76 Producers,
77 Coal,
78 Water
79 Carbureter
80 Fixer,
81 Retort,
84 Oil gas
82 Up-and-down run
83 Interlocking valves,
85 Carbon monoxid,
75 Oil and steam injected,
63 Air and steam injected
64 Superheated.
65 Electric,
66 Rotary bottom,
67 Water jacket
68 Rotary bottom,
69 Water-seal pit,
74 Refractory filling,
Fuel agitating
85.1 Movable wall,
85.2 Stirrer,
86 Chargers,
87 Accessories,
89 Retort
98 Coal, oil, and water,
99 Coal and water,
100 Coal and oil,
101 Coal,

48. GAS, HEATING AND ILLUMINATING—Continued.

Generators
Retort
102 Oil
103 Electric heater,
104 Jet mixers,
105 Steam injected,
106 Automatic feed,
107 Air injected,
108 Water
109 Carbureter,
110 Oil gas,
111 Wood
112 Oil,
92 Metal bath,
93 Oil and gas injected,
94 Oil and steam injected
95 Air,
96 Carbureter,
90 Domestic plants,
113 Furnaces,
118.5 Portable.
119 **Retorts**
120 Compound,
122 Inclined,
123 Vertical,
124 Lids,
126 Attachments.
196 **Natural.**
144 **Carbureters**
160 Gravity,
161 Lamps
162 Gravity.
128 **Purifiers.**
170 **Center and by-pass valves.**
173 **Exhausters.**
174 **Holders**
175 High-pressure safety escape,

48. GAS, HEATING AND ILLUMINATING—Continued.

Holders
176 Bell and tank
177 Sectional bell,
178 Collapsible,
179 Tank.
180 **Mixers**
181 Bell and tank
182 Anterior,
183 Posterior,
184 Diaphragm,
185 Gravity,
186 Pump,
187 Rotary drum,
188 Anterior,
189 Posterior.
190 **Distribution**
191 Regulating pressure,
192 Safety devices,
193 Leakage
194 Preventing,
195 Odorizers.
197 **Processes**
Hydrogen
199 Carbureting,
200 Coal, oil, and water,
201 Coal and oil,
202 Coal and water,
203 Producer,
204 Water
205 Carbureting,
206 Continuous,
207 Down run,
208 Up-and-down run,
209 Wood,
210 Coal,
211 Oil
212 Air injected,
213 Gas injected,

48. GAS, HEATING AND ILLUMINATING—Continued.

Processes
214 Oil and steam injected
215 Air,
216 Acetylene
217 Slow,
219 Carbureting.

49 GLASS.

1 **Combined machines**
2 Incandescent-lamp making,
3 Sheet and plate making
4 Flattening and annealing,
5 Charging, cutting, and molding,
6 Shaping and cutting,
7 Reheating and reshaping,
8 Pressing and blowing
9 In separate molds
10 Internal press mold,
11 Descending mold bottom,
12 Casting and blowing
13 In separate molds.
14 **Miscellaneous.**
16 **Pin-heading.**
17 **Drawing**
17.1 Cylinders.
18 **Blowing**
19 Traveling mold,
20 Manipulating blow iron,
21 Tools.
22 **Reshaping.**
23 Neck forming
24 Tools
25 Divided mandrel,
26 Crimping,
27 Spreading or flaring.
28 **Perforating.**
29 **Molding**
30 Curved pipes and tubes,
31 Vertical pipes and tubes,
32 Wire glass,
33 Rolling
34 Bed and roller,
35 Presses
36 Screw threading,
37 Traveling mold,
38 Fluid operated,

49. GLASS—Continued.

Molding

39 Casting.

40 **Mold coolers.**

41 **Mold supports and carriers.**

42 **Mold-separating devices**

43 Drawing core.

44 **Flattening.**

45 **Annealing**

46 Furnaces

47 Conveying.

48 **Cutting hard glass**

50 Heat applying,

52 Tools.

53 **Heating apparatus**

54 Tank furnaces

55 Delivering,

56 Separate gathering pool,

57 Reheating furnaces

58 Work manipulating,

59 Pot furnaces,

60 Melting pots,

61 Floats.

62 **Gathering and ladling.**

63 **Batch mixers.**

65 **Molds**

66 Uniting parts,

67 Bending,

68 Cooling or heating,

69 Blowing

70 Labeling,

71 Vented,

72 Pressing

73 Laterally separable sides,

74 Helically separable

75 **Clamping,**

76 **Cores and plungers.**

64 **Snaps and sockets.**

15 **Tools.**

49. GLASS—Continued.

77 **Processes**

77.5 Slag,

78 Incandescent-lamp making,

78.1 Quartz glass,

79 Combined

80 Molding and blowing,

81 Uniting parts

82 Glass to glass

82.1 Bifocal lenses,

83 Blowing,

83.1 Drawing,

84 Reshaping,

85 Molding

86 Wire glass,

87 Sheets and plates,

88 Heat-developed coloring.

89 Annealing.

92 **Structure.**

50 FLUID-PRESSURE REGULATORS.

1 **Combined regulators and cut-offs**

2 Valve balancing,

3 Liquid transfer,

4 Diaphragm

5 Lever,

6 Float

7 Lever,

8 Piston

9 Lever.

10 **Multiple regulating devices**

11 Auxiliary valve

12 Venting.

Regulators

13 Balanced pressure,

14 Inlet pressure,

15 Outlet pressure

16 Varying resistance

17 Automatic weight varying,

18 Clockwork,

19 Liquid transfer,

20 Valve balancing,

21 Diaphragm

22 Water protected,

23 Spring,

24 Weight,

25 Lever

26 Spring,

27 Weight,

28 Float

29 Spring,

30 Weight,

31 Lever

32 Spring,

33 Weight,

34 **Piston**

35 Spring,

36 Weight,

50. FLUID-PRESSURE REGULATORS—Continued.

Regulators

Outlet pressure

Piston

37 Lever

38 Spring,

39 Weight.

51 ABRADING.

1 **Miscellaneous.**
2 **Machines**
3 Combined
4 Scouring and polishing,
5 With nonabrading operations,
6 Graining boxes,
7 Immersion,
8 Sand blast
9 Mechanical,
10 File cleaning and resharpening,
11 Nozzles,
12 Supply tanks and valves,
13 Tumbling barrels,
14 Moving work holder
15 Rotary,
16 Scouring devices
17 Immersion
18 Roller work feed,
19 Rotary work holder,
20 Winding drum,
21 Reciprocating tool,
22 Rotary cylinder
23 Opposed
24 Rotary disk
25 Opposed,
26 Without tool
27 Valve and seat
28 Plug cock,
29 Puppet valve,
30 Slide valve,
31 Rotary reciprocating tool
32 Peripheral face
33 Oscillating,
34 Rectilinear
35 Compound,
36 Harvester-knife sharpeners,
37 One-way cut,

51. ABRADING—Continued.
Machines
Rotary reciprocating tool
Peripheral face
Rectilinear
38 One-way work traverse
39 Roller work feed,
40 Opposed
41 Reciprocating work holder
42 Work rotating,
43 Planetary,
44 Reciprocating work holder
45 Rectilinear,
46 Rocking,
47 Swinging tool carrier,
48 Work rotating
49 Roll grinders,
50 Rotary work holder
51 Disk andw heel grinders,
52 Gear grinders,
53 Turret,
54 Radial face
55 Oscillating,
56 Rectilinear,
57 Reciprocating tool
58 Oscillating,
59 Rectilinear
60 Compound,
61 Endless work carrier,
62 Flexible
63 Stropping machines,
64 Reciprocating work holder
65 Rocking,
66 Roller work feed,
67 Rotary work holder,
68 Swinging tool carrier
69 Actuating handle,
70 Winding drum,

51. ABRADING—Continued.
Machines
71 Rotary tool
72 Peripheral face
73 Internal,
74 One-way work traverse
75 Drawing reel,
76 Endless work carrier,
77 Nut and screw,
78 Roller work feed
79 Work rotating,
80 Opposed
81 Alternating tool,
82 Plunger feed,
83 Reciprocating work holder,
84 Rectilinear
85 Rocking,
86 Rocking,
87 Roller work feed,
88 Work rotating
89 Rotary work holder,
90 Planetary
91 Reciprocating work holder
92 Rectilinear
93 Compound,
94 Rocking,
95 Work rotating,
96 Rocking
97 Work rotating,
98 Stationary work holder,
99 Swinging tool carrier,
100 Templet
101 Rotary,
102 Work guide,
103 Work rotating
104 Disk and wheel grinders,
105 Rotary work holder
106 Disk and wheel grinders,
107 Glassware ornamenting,
108 Turret,

51. ABRADING—Continued.
Machines
Rotary tool
109 Radial face
110 One-way work traverse,
111 Opposed
112 One-way work traverse,
113 Reciprocating work holder
114 Rectilinear,
115 Rocking,
116 Work guide,
117 Work rotating
118 Rotary work holder,
119 Orbital
120 Planetary,
121 Reciprocating work holder
122 Rectilinear,
123 Work rotating,
124 Rocking,
125 Stationary work holder,
126 Swinging tool carrier,
127 Template,
128 Work guide,
129 Work rotating
130 Raceway,
131 Rotary work holder
132 Disk and wheel grinders,
133 Planetary,
134 Turret,
135 Traveling band
136 Chain,
137 One-way work traverse
138 Endless work carrier,
139 Roller work feed,
140 Opposed,
141 Pressers and formers,
142 Reciprocating-band carrier,
143 Reciprocating work holder
144 Work rotating,
145 Rotary work holder,

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51. ABRADING—Continued.

Machines

Traveling band
146 Superposed,
147 Swinging band carrier,
148 Tension devices,
149 Stationary tool
150 Flexible
151 Reciprocating work holder
152 Needle-eye polishers,
153 Stropping machines,
154 Work rotating
155 Stropping machines,
156 Rigid
157 Reciprocating work holder
158 Blade sharpeners
159 Blade reversing,
160 Lens grinders,
161 Rotary work holder
162 Lens grinders,
163 Tumbling devices
164 Drum,
164.5 Tumbling shapes,
165 Precision devices,
166 **Frames and mounts**
167 Double treadle,
168 Hanging grindstones
169 Balancing,
170 Portable
171 Button cleaners,
172 Calk sharpeners,
173 Edge-tool sharpeners,
174 Floor-surfacing machines
175 Reciprocating tool,
176 Rotary cylinder,
177 Rotary disk,
178 Rail grinders,
179 Roll and wheel grinders,
180 Wall-surfacing machines,

51. ABRADING—Continued.

181 **Tools, combined.**
182 **Tools, scouring devices**
183 Rubbers
184 Pivoted.
184.1 **Tools, expansible**
184.2 Spring pressed,
184.3 Wedge,
184.4 Cam.
185 **Tools, flexible**
186 Actuating handle
187 Sheet holders,
188 Endless band,
189 Reciprocating block,
190 Rotary cylinder
191 Centrifugal,
192 Inflation,
193 Laminated,
194 Sheet holders,
195 Rotary disk
196 Inflation,
197 Sheet holders,
198 Strops
199 Inflation,
200 Suspension
201 Attaching devices,
202 Reel,
203 Tension.
204 **Tools, rigid**
205 Actuating handle,
206 Rotary cylinder
207 Laminated,
208 Work guide,
209 Rotary disk
210 Work guide,
211 Stationary
212 Metal,
213 Oilers and moisteners,
214 Work guide.

51. ABRADING—Continued.

215 **Work feeders.**
216 **Work holders**
217 Clamp
218 Edge tool
219 Drill
220 Gauging devices
221 Portable,
222 Harvester knife
223 Suspension,
224 Reciprocating,
225 Rotary cutter,
226 Seat controlled,
227 Hollow work,
228 Skate,
229 Dops and sticks,
230 Reciprocating
231 Rectilinear
232 Work rotating,
233 Fluid-pressure actuated,
234 Rocking,
235 Vacuum,
236 Work rotating
237 Rotary work holder,
238 **Work rests**
239 Gauging devices.
240 **Work tables.**
241 **Attachments**
242 Card grinders
243 Flats,
244 Commutator grinders,
245 Internal grinders,
246 Machine knife sharpeners
247 Rotary tool
248 Work actuated,
249 Rotary reciprocating tool,
250 Stationary tool,
251 Roll and wheel grinders
252 Reciprocating tool

51. ABRADING—Continued.

Attachments

Roll and wheel grinders
Reciprocating tool
253 Nut and screw,
254 Rotary reciprocating tool,
255 Stationary tool,
256 Sewing machine
257 Flywheel,
258 Vehicle,
259 Lathe
260 Center grinders,
261 Internal grinders.

262 **Accessories**
263 Abradant supplying
264 Graders,
265 Button-cleaning shields,
266 Cooling
267 Wetting grindstones,
268 Guards and housings
269 Breakage guards,
270 Collectors,
271 Drive shields,
272 Spark and splash guards,
273 Suction,
274 Work guards,
275 Sheet-applying devices,
276 Strop-surface renewing,
277 Work-mounting devices.

281 **Abrading processes**
282 Tumbling and sandblasting,
283 Glass and stone grinding
284 Lens,
285 Razor, knife, and scissors sharpening,
286 Gage grinding,
287 Gear and worm grinding,
288 Drill, thread, thread cutter, reamer, and rotary cutter grinding,

51. **ABRADING**—Continued.

Abrading processes

289 Roll, roller, shaft, ball, and piston grinding,
290 Ring, tube, bushing, sleeve, and cylinder grinding
291 Bearing raceways,
292 Abrasive supplying.

293 **Abrasive tool making processes, materials, and compositions**

294 Bags or filled cloth,
295 Impregnating or coating of abrasive tools,
296 Pore forming,
297 Laminating,
298 With synthetic resin,
299 With rubber or reaction product thereof,
300 With natural resin or reaction product thereof,
301 With protein or reaction product thereof,
302 With carbohydrate or reaction product thereof
303 Cellulose or derivative thereof,
304 With fats, fatty oils, or fatty oil acids and salts thereof,
305 With ester type wax, bituminous material, or tarry residues,
306 With hydrocarbon,
307 With inorganic materials
308 Clay, silica and silicates,
309 Metals and metal oxides.

52 EXPLOSIVE, PYROTECHNIC, AND MATCH COMPOSITIONS.

1 **Explosive**
2 Priming
3 Fulminate of mercury, containing,
4 Nitrate or nitro-compound containing,
5 Nitro compounds
6 With metals,
7 With metallic salts
8 Nitrates with chlorates,
9 Nitrates with carbonates,
10 Nitrates and sulfur,
11 Nitrates,
12 Chlorates,
13 Two or more compounds,
14 Metallic-salt type
15 With metals,
16 Nitrates with chlorates,
17 Nitrates and sulfur,
18 Chlorates,
19 Processes
20 Nitro compounds
21 With metallic salts,
22 Two or more compounds,
23 **Pyrotechnic**
24 Metal-element containing.
25 **Match**
26 Splint coating or impregnating.
27 Friction ignited.
28 Phosphorus containing
29 With chlorates.

53 DOMESTIC COOKING VESSELS.

Boilers
1 Domestic
2 Steamers.
3 **Coffee and tea pots**
3.5 Infusing receptacles.
15 **Cookers**
16 With canning,
17 Agitating,
18 Continuous,
19 Sealed can processors
20 Processes
21 Processes.
4 **Corn poppers.**
22 **Food compacting type.**
5 **Gridirons.**
11 **Heat insulated.**
Pans
6 Bake,
7 Frying.
8 **Pots and kettles.**
9 **Teakettles.**
10 **Waffle irons.**

54 HARNESS.

1 **Miscellaneous.**
71 **Breaking and training devices**
72 Leg spreaders.
77 **Ox yokes.**
2 **Track.**
3 **Yokes.**
24 **Halters**
85 Connectors
6 **Bridles**
7 Bits
8 Mouthpieces
9 Double,
10 Blinds
11 Covering and uncovering,
12 Brow bands,
13 Crown loops,
14 Gag runners,
15 Stranglers.
57 **Underchecks.**
16 **Checkreins.**
17 Hook loops,
61 **Checkhooks**
62 Movable keeper.
70 **Checking and unchecking devices.**
35 **Martingales.**
36 **Reins.**
74 **Rein holds.**
63 **Terrets.**
73 **Rein guards.**
34 **Hitching straps.**
64 **Hitching-strap holders.**
18 **Combined collar and hames.**
19 **Collars**
20 Breast,
21 Fasteners.
25 **Hames**
26 Fasteners
29 Top,

54. HARNESS—Continued.
Hames
Fasteners
27 Lever.
28 Strap.
30 **Hame and trace connectors**
31 Adjustable.
32 **Hame tugs**
33 Adjustable.
58 **Breast straps**
59 Shields and connectors.
50 **Thill tugs**
51 Open.
52 **Traces**
53 Whiffletree connectors.
54 **Trace carriers**
55 Hook.
56 **Trace-end supporters.**
69 **Attaching and detaching devices.**
37 **Saddles**
38 Harness
39 Cart,
40 Pivoted side plates,
41 Cushions,
42 Seat and tree connectors,
43 Tug bearers,
44 Riding
45 Side,
46 Attachments.
47 **Stirrups**
49 Safety,
48 Elastic.
23 **Girths.**
4 **Backbands.**
5 **Breeching.**
22 **Cruppers.**
65 **Pads**
66 Back,
67 Neck,
68 Fasteners.

54. HARNESS—Continued.

87 **Loops.**
Trimmings
75 Covered,
76 Ornamental.
78 **Tail holders.**
79 **Blankets.**
80 **Bonnets and shields.**
81 **Fly nets.**
82 **Horse boots.**
83 **Spurs.**
84 **Supports.**

55 HARROWS AND DIGGERS.

1 **Clod crushers**
21 Barred and corrugated rollers
77 Disks,
22 Crush bars,
23 Crush bars and harrows,
24 Toothed rollers and wheels
78 Geared.

3 **Harrows**
80 Center hinged,
29 Changeable form,
30 Disk
122 Center cutter,
81 Pivoted gang
82 Center cutter,
83 Multiple gang,
124 Pivot swung,
31 Expansible
125 V shaped,
32 Flexible,
84 Multiple,
11 Revolving
126 Center hinged,
85 Geared,
13 Rotary,
152 Spiral,
33 Spring tooth
127 Weeders,
86 Tooth bars,
34 Tooth cleaners,
149 Trailing tooth,
128 V shaped,
19 Wheel
87 Center hinged,
73 Disk,
88 Floating,
89 Multiple,
90 Pivoted tooth bar,
91 Riding attachments,

55. HARROWS AND DIGGERS—Con.

Harrows
Wheel
20 Rotary,
74 Spring
92 Pivoted tooth bar,
75 Trailing teeth,
93 Winged,
150 Winged,

Harrow teeth
35 Spike
94 Clamped,
95 Nutted,
96 Wedged,
36 Spring
97 Sectional,
37 Trailing and draw cut.

6 **Land rollers**
46 Furrowers and markers,
47 Pivoted,
48 Weighted cylinders,
49 Weighted frames.

7 **Pivoted teeth**
153 Tooth with limited play,
154 Tooth clamp adjustable.

8 **Pivoted tooth bars**
76 Frameless,
102 Lever actuated
103 Spike tooth
129 Yielding bar,
104 Spring tooth,
105 Trailing tooth,
130 Spring tooth,
131 Yielding bar.

9 **Potato diggers**
50 Bearing-wheel separators,
106 Beet lifters,
107 Cutters,

55. HARROWS AND DIGGERS—Con.

Potato diggers
51 Endless carrier
132 Platform inferior,
133 Platform superior,
134 Plow pivoted independently,
135 Plow pivoted on carrier front,
136 Plow pivoted on carrier rear,
137 Plow rigid,
138 Rakes,
108 Graspers,
54 Plow and screen
139 Plow rigid,
53 Plow clearers
109 Reels,
55 Plow, vibrating screens
110 Cam
140 Plow rigid,
111 Crank
141 Plow rigid,
142 Plow rigid,
112 Sidewise
143 Plow rigid,
113 Tappet
144 Plow rigid,
57 Screen cylinders,
56 Sifting wheels, side delivery,
58 Spiral conveyers,
59 Toothed drum.

12 **Rollers and harrows.**
Stalk choppers
60 Draw cut,
63 Reciprocating,
Revolving
61 Horizontal
118 Breakers,
62 Vertical,

55. HARROWS AND DIGGERS—Con.

Stalk choppers

64 Vine cutters.

Stalk pullers

65 Hand

148 Tongs,

66 Wheel.

17 **Stone gatherers.**

18 **Transplanters**

119 Ballers,

67 Dibbles,

68 Pivoted jaws,

70 Posthole diggers

71 Pivoted jaws,

69 Sliding jaws.

56 HARVESTERS.

1 **Miscellaneous.**

2 **Convertible**

3 Cutter and detachable conveyer

Rake

4 Vertical axis,

5 Cutter and detachable catcher.

6 **Gang**

7 Rotating cutting reel.

8 **Marine**

9 With conveyer.

10 **Motor**

11 Cotton

12 Pneumatic

13 Individually directed,

14 Pickers

15 Cornstalk type

16 Cutters with choppers and catchers,

17 Cutters with strippers or toppers,

18 Pickers or huskers,

19 Seed gatherers or strippers,

Cutting, conveying, and threshing

20 Reciprocating cutter,

21 Central swath, coaxial wheels,

22 Cutting, conveying, and binding,

23 Cutting and conveying

24 Rotating cutting reel,

25 Cutting only

25.4 Rotating cutting disk type,

26 Rotating cutting reel,

26.5 Reciprocating cutter, steered by walking attendant,

27 Gathering.

27.5 **Tobacco.**

28 **Cotton**

29 Flail or whip.

30 Pneumatic

31 Individually directed.

32 Nozzles,

56. HARVESTERS—Continued.

Cotton

33 Strippers

34 Comb

35 Moving,

36 Pickers

37 Individually directed

38 Endless belt

39 Manually operated,

40 Rotary or oscillating

41 Spindle

42 Belt carried

43 Cam-track guide,

44 Rotary carrier

45 Flexible spindle,

46 Reciprocating,

47 Cam-track guide,

48 Drum,

49 Endless belt,

50 Spindles.

51 **Cornstalk type**

52 Stalk breakers,

53 Cutters

54 Broom corn

55 Reel gatherer,

56 Toppers with catchers

57 Reel gatherer

58 Horizontal axis,

59 Endless-chain gatherer,

60 With choppers

61 With catchers,

62 With strippers,

63 With toppers,

64 With pickers or huskers

65 Reel gatherer,

66 Endless-chain gatherer,

67 Self-binders

68 Upright binder

69 Endless-chain gatherer

70 Binder position adjustable,

56. HARVESTERS—Continued.

Cornstalk type

Cutters

71 With dischargers

72 Crane type

73 With gatherers

74 Reel,

75 Endless chain,

76 Endless apron

77 Reel gatherer,

78 Endless-chain gatherer,

79 Horizontally moving and tilting

80 With gatherers

81 Reel,

82 Endless chain,

83 Tilting

84 With gatherers

85 Spiral,

86 Reel

87 Horizontal axis,

88 Endless chain,

89 Fixed,

90 Retracting support

91 Reel gatherer,

92 Reel gatherer,

93 Endless-chain gatherer,

94 With gatherers

95 Spiral,

96 Reel

97 Horizontal axis,

98 Endless chain,

99 Fixed

100 Fixed cutter,

101 Fixed cutter,

102 Cutting members,

103 Pickers or huskers

104 Roller

105 Plurality of rows

106 With endless-chain gatherers only,

56. HARVESTERS—Continued.

Cornstalk type
Pickers or huskers
Roller
107 Auxiliary ear detacher
108 With endless-chain gatherers only,
109 Movable gatherer
110 Spiral,
111 Endless chain only
112 Adjustable roller frame,
113 Fixed snapper
114 Comb
115 With knife,
116 Moving comb,
117 Moving knife
118 On endless chain,
119 Gatherers or guides,
120 Sheaf loaders,
121 Sheaf carriers.
122 **Cutting, conveying, and threshing**
123 Reciprocating cutter
124 Central swath, coaxial wheels,
125 Longitudinally hinged cutter frame.
126 **Seed gatherers or strippers**
127 Fixed comb
128 Rotary beater
129 Central swath, coaxial wheels,
130 Moving comb.
131 **Cutting, conveying, and binding**
132 Wire-twister type,
133 Straw-band type,
134 Folding platform,
135 High outside binder
136 Folding binder frame,
137 Binder position adjustable
138 Knotting,
139 Knotting,
140 Upright binder,

56. HARVESTERS—Continued.

Cutting, conveying, and binding
141 Endwise delivery
142 Knotting,
143 Low down
144 Curved path
145 Knotting,
146 Inside delivery
147 Knotting,
148 Outside delivery
149 Through bull wheel,
150 Knotting,
151 Knotting,
152 Knotting.
153 **Cutting and conveying**
154 Endless cutter,
155 Oscillating cutter,
156 Rotary cutting reel,
157 Rotary cutting disk,
158 Reciprocating-cutter type
159 Folding platform,
160 With binder's platform
161 Self-raking mechanism
162 Belt-carried endless path,
163 Hand-raking mechanism
164 Self-raking mechanism
165 Gaveling tongs,
166 Dumping catcher,
167 Rotating
168 Reciprocating head,
169 Vertical axis
170 Switch
171 Automatic control
172 Auxiliary manual control,
173 Reciprocating
174 Belt actuated
175 Reciprocating belt,
176 Vertical circuit
177 Belt carried,

56. HARVESTERS—Continued.

Cutting and conveying
Reciprocating-cutter type
Self-raking mechanism
178 Horizontal circuit
179 Belt carried,
180 Rake heads and arms,
181 Endless carrier
182 Deflected course,
183 Intermittent,
184 With discharging catcher,
185 Elevated delivery,
186 Central cutter, coaxial wheels
187 Tilting platform
188 Pivoted tongue,
189 Swathing attachments,
190 Windshields,
191 Binders' platforms.
192 **Cutting and windrowing.**
193 **Cutting and raking.**
194 **Cutting and catching**
195 Side cutter
196 Rear,
197 Front,
198 Rotating cutting reel
199 Catchers
200 Discharging,
201 Manually propelled,
202 Catchers
203 Discharging
204 Revolving,
205 Upwardly swinging rear gate,
206 Rearwardly dropping member.
207 **Shelled-grain catchers.**
208 **Platform adjustments**
209 Side hill.
210 Main frame
211 Traction operated,

56. HARVESTERS—Continued.

Platform adjustments
Main frame
212 Vertically and longitudinally tilting
213 Simultaneous vertical adjustment,
214 Vertical
215 Segment rack and pinion
216 Simultaneous,
217 Simultaneous.
218 **Tongue adjustments and supports.**
219 **Standing-grain gatherers**
220 Rotating reel, horizontal axis
221 Adjustable position
222 With driving means
223 Sliding angular gear,
224 Belt with adjustable tension,
225 Concentric,
226 Supplementary bat movement,
227 Adjustable bats.
228 **Transporting attachments.**
229 **Cutting**
230 Railroad
231 Rotating cutting reel,
232 Reciprocating cutter,
233 Hedge or plant-row trimmers
234 Plurality of cutters
235 All rotary disk,
236 All reciprocating,
237 Single cutter for top or side,
238 Successive cuts at different heights,
239 Hand-operated cutter
240 Oscillating
241 Single pair of shears,
242 Reciprocating
243 Hand crank,
244 Endless cutter
245 Side cut,
246 Oscillating cutter

56. HARVESTERS—Continued.
Cutting
Oscillating cutter
247 Vertical cut,
248 Side cut,
249 Rotating cutting-reel type
250 Sharpening,
251 Auxiliary cutter,
252 Cutter in front of wheel tread,
253 Coaxial wheels central cut
254 Internal gear single pinion,
255 Rotating-cutting-disk type
256 Vertical cut,
257 Reciprocating central cutter
258 Coaxial wheels
259 Double sickle,
260 Pitman drive
261 With lever,
262 Cam drive
263 With lever,
264 Reciprocating side cutter
265 Through-wheel drive,
266 Reversible,
267 Horizontally folding,
268 Rear cut
269 Coaxial wheels
270 Cam or lever drive,
271 Front cut
272 Coaxial wheels
273 Power-operated lift,
274 Automatic clutch shipper
275 Double sickle,
276 Lifting and rocking cutter bar
277 With foot lever
278 Gag lever
279 Cutter-bar mountings only,
280 Cutter-bar mountings only
281 Gag lever,
282 Cutter-bar mountings only.

56. HARVESTERS—Continued.
Cutting
Reciprocating side cutter
Front cut
Coaxial wheels
283 Lifting cutter bar
284 Cutter-bar mountings only
285 With foot lever,
286 Gag lever,
287 Cutter-bar mountings only,
288 Alignments,
289 Cutter members
290 Endless
291 Horizontal orbit
292 With tension adjustment,
293 Oscillating,
294 Rotating cutting reel,
295 Rotating cutting disk,
296 Reciprocating
297 Double sickle,
298 Sickles and guard fingers and bars,
299 Sickles
300 Detachable sections
301 Detachable from end of bar,
302 Auxiliary locking bar,
303 Shoes and knife heads,
304 Antifriction devices,
305 Guiding clips,
306 Shock absorbers,
307 Guard fingers and bars
308 Modified finger
309 With ledger plate,
310 Fingers only
311 With ledger plate,
312 Supplemental lifting fingers
313 Socket for guard-finger point,

56. HARVESTERS—Continued.
Cutting
314 Track clearers and dividers
315 Supplemental vertical cutter
316 Reciprocating,
317 Driven,
318 With shoe-point socket,
319 Foldable,
320 Supplemental clearer.
321 **Anti-side-draft devices.**
322 **Grain wheels and casters.**
323 **Seats.**
324 **Grain cradles**
324.5 Connections.
327 **Vegetable gatherers.**
328 **Fruit gatherers**
329 Catchers,
330 Berry strippers,
331 Berry clippers,
332 Pole supported
333 Pivoted jaw
334 Chute,
335 Pivoted knife
336 Chute,
337 Sliding jaw,
338 Sliding knife,
339 Fixed detaching member
340 Chute.
341 **Raking and bundling**
342 Hand,
343 Cord-knotter type.
344 **Raking and loading**
345 Endless carrier
346 Intermittent discharge
347 With movable feeder
348 Stationary rake teeth,

56. HARVESTERS—Continued.
Raking and loading
Endless carrier
Intermittent discharge
349 Stationary rake teeth,
350 Rear delivery
351 With movable feeder
352 Stationary rake teeth,
353 Stationary rake teeth,
354 Side delivery
355 With movable feeder
356 Stationary rake teeth,
357 Stationary rake teeth,
358 With movable feeder
359 Stationary rake teeth,
360 Stationary rake teeth,
361 Intermittent discharge,
362 Walking rake
363 Auxiliary rake,
364 Lifting reels.
365 **Combined rakes and tedders**
366 Side-delivery rake,
367 Revolving rake,
368 Draft dumping rake,
369 Transverse tedder crank shaft.
370 **Tedders**
371 Mower attachment,
372 Rotary, transverse axis,
373 Transverse crank shaft,
374 Tedder forks.
375 **Horse rakes**
376 Side delivery
377 Rotary,
378 Rear delivery
379 Revolving
380 Wheels supported
381 Fixed rake axis,
382 Rake-tooth-engaging stop,
383 Rake-tooth-engaging stop.

56. HARVESTERS—Continued.

Horse rakes

Rear delivery
384 Wheel supported
385 Contractible,
386 Draft dumpers
387 Direct draft,
388 Frictional,
389 Spur gear,
390 Sliding bolt or bar,
391 Pawl and ratchet
392 Transverse torsion rod.
393 Hand lever pulled back to dump.
394 Hand lever concentric with rake head.
395 Clearers,
396 Wheel supported
397 With lifting means
398 Draft operated,
399 Fenders,
400 Rake teeth and fastenings.
400.01 **Hand rakes**
400.02 Rotary or endless
400.03 Impaling type,
400.04 Combined, convertible and attachments
400.05 With cutter, scraper or spreader
400.06 Directed oppositely to rake,
400.07 Acting simultaneously with rake,
400.08 With cleaner
400.09 With ground support,
400.10 With actuating linkage,
400.11 With guard or material receiver
400.12 Grappling type,
400.13 With ground support,
400.14 With ground support
400.15 Skid or runner type,

56. HARVESTERS—Continued.

Hand rakes

400.16 With plural sets of tines,
400.17 Broom type
400.18 Adjustable or expansible,
400.19 Adjustable, folding or take-down
400.20 Biased pivoted head or tines,
400.21 Tines or teeth.
401 **Shockers**
402 Automatic feed
403 Self-binding
404 Vertical position
405 Automatic shock-delivery trip
406 Oscillating sheaf-delivery member,
407 Sheaf turned end for end,
408 Forwardly tilting shock
409 Automatic shock-delivery trip,
410 Vertical position
411 Rotary, vertical axis
412 Automatic shock-delivery trip
413 Oscillating sheaf-delivery member,
414 Automatic shock-delivery trip
415 Alternating sheaf delivery,
416 Alternating sheaf delivery,
417 Sheaf turned end for end
418 Automatic shock-delivery trip,
419 Forwardly tilting shock
420 Automatic shock-delivery trip
421 Number,
422 Feed stopped during shock delivery,
423 Rearwardly opening former,
424 Shock turned end for end,

56. HARVESTERS—Continued.

Shockers

425 Vertical position
426 Rotary, vertical axis,
427 Direct drop,
428 Divided former,
429 Self-binding,
430 With compressor,
431 Props.
432 **Compressing and binding**
433 Cord knotter type
434 Adjustable position
435 Knotting,
436 Pressure tripped
437 Upstanding compressor control
438 Packing
439 Knotting,
440 Packing
441 Knotting,
442 Knotting,
443 Packing
444 Knotting,
445 Knotting,
446 Packers,
447 Auxiliary manual trip,
448 Needle cleaners and guards,
449 Ejectors and discharge gates,
450 Tension and take-up devices,
451 Wire twister type
452 Single wire
453 Curved binder arm
454 Laterally mounted,
455 Forked end,
456 Twister on binder arm,
457 Twisters,
458 Band-tucker type
459 Straw band
460 Band forming
461 Rotating bundle,
462 Band formers,

56. HARVESTERS—Continued.

Compressing and binding

463 Prepared band,
464 Cord band and clip
465 Flat metal clip.
466 **Grain adjusters**
467 On deck
468 Head or butt evener
469 Oscillating,
470 Endless apron,
471 Feeders,
472 Retarding arms,
473 Longitudinally moving straightening finger.
474 **Sheaf carriers**
475 Automatic discharge
476 Directly tilting,
477 Endless carrier,
478 Folding tines,
479 Opening bottom,
480 Directly tilting.

57 TEXTILES, SPINNING, TWISTING AND TWINING.

1 **Apparatus.**
2 Stapilizing,
3 Covering or wrapping
4 Hair, grass, quillstock or the like,
5 With loose fibers,
6 With other operations
7 With coating or impregnating,
8 With powdered material incorporating,
9 With wire or strand preforming or shaping,
10 Stationary core type,
11 Rotating core type,
12 With twisting couple,

Apparatus

Covering or wrapping
13 With plural strands
14 With cabling or doubling,
15 In successive layers
16 With coaxial covering material supply,
17 With coaxial covering material supply,
18 With coaxial covering material supply,
19 With stopping or starting,
20 Waxed ends,
21 Endless bands,
22 Splicing
23 Implements,
24 Chenille,
25 Ends or hanks
26 Doubling feature
27 With reverse twist controller,
28 Hair, grass or the like
29 Curling hair,
30 Feeding,
31 Paper, cellulose tape, or like material
32 With coating or impregnating,
33 Hollow rope machines,
34 With other operations
35 With coating or impregnating,
36 With drawing
37 Domestic,
38 Spot or fancy yarn making,
39 Intermittent
40 Mule type
41 Spindle drive control
42 Quadrant
43 Faller controlled,
44 With nosing attachment,

57. TEXTILES, SPINNING, TWISTING AND TWINING—Continued.

Apparatus

With other operations
With drawing
Intermittent
Mule type
45 Faller control
46 Copping rail.
47 Feed control,
48 Carriage checks.
49 Carriages,
50 With carding,
51 With twister head,
52 With doffing or donning
53 Traveling carriage,
54 With preparing for doffing or donning,
55 With wire or strand preforming or shaping,
56 With clearing
57 Of traveler,
58 Unitary multiple twist devices,
59 Delivery twist type
60 With twisting couple
61 With stopping or starting
62 With winding
63 With cabling,
64 With cabling,
65 Planetary type,
66 Receiving twist type
67 Flier type
68 With capstan,
69 Flier supported receiving element,
70 Bobbin lag or drag type,
71 With traversing strand guide or receiver,
72 Bobbin lag or drag type,
73 Spindle tip type,

57. TEXTILES, SPINNING, TWISTING AND TWINING—Continued.

Apparatus

Receiving twist type
74 Cap type,
75 Ring and traveler type,
76 Centrifugal pots and guides
77 With driving connections,
78 Stopping or starting
79 Traverse controlled,
80 Strand controlled
81 Electric,
82 Twisting couple and feed.
83 Feeding means stopping
84 Roll separating,
85 Strand shifting,
86 Severing
87 With clamping,
88 Spindle stopping
89 Laterally movable spindle,
90 Feeding
91 Irregular,
92 Driving
93 Speed adjusting
94 Constant variation
95 With traverse controlled variation,
96 Fly frame,
97 Drawing rollers,
98 Traverse controlled variation,
99 Traversing,
100 Electric
101 Turbine,
102 Gear
103 Friction,
104 Band
105 Tensioning,
106 Strand guiding or guarding
107 Catching or holding,
108 Separators,

57. TEXTILES, SPINNING, TWISTING AND TWINING—Continued.

Apparatus

Strand guiding or guarding
109 Thread boards
110 Traversing,
111 With lifting means.
112 Elements
113 Drag,
114 Nippers,
115 Fliers
116 Unwinding type,
117 With pressers,
118 Ring and raceway type,
119 Rings and travelers
120 With lubrication,
121 With guards or protectors,
122 With supporting, retaining or adjusting means
123 With bar type traveler,
124 Rotating rings,
125 Travelers
126 Bar type,
127 Caps,
128 Twister heads,
129 Receiving elements
130 Whirl driven
131 With yarn holding means,
132 With spindle retaining means,
133 With lubrication
134 Live spindle,
135 Live spindle,
136 Rails, rail guides and supports
137 Ring,
138 Dies and mandrels.
139 **Strand structure**
140 Synthetic filaments and/or fibers,
141 Endless bands,
142 Splices,
143 Chenille,

57. TEXTILES, SPINNING, TWISTING AND TWINING—Continued.

Strand structure

144 Covered or wrapped
145 Cored wire rope
146 Composite
147 Cabled,
148 Cabled,
149 Coated or impregnated
150 Paper, cellulose tape or like material,
151 Paper, cellulose tape or like material,
152 On elastic core,
153 Coated or impregnated
154 Paper, cellulose tape or like material,
155 Paper, cellulose tape or like material,
156 **Processes**
157 Synthetic filaments and/or fibers,
158 Endless band forming,
159 Splicing,
160 Covering or wrapping
161 Cored wire rope making,
162 With coating or impregnating,
163 On elastic core,
164 Coating or impregnating
165 Paper, cellulose tape or like material,
166 Wire rope making,
167 Paper, cellulose tape or like material.
168 Elastic strand making.

58 HOROLOGY.

1 **Miscellaneous.**
2 **Clocks**
3 Astronomical,
4 Calendar
5 Dial,
6 Roller,
Geographical
43 Disk,
44 Globe,
45 Magic,
50 Illuminated,
23 Electric
24 Systems,
25 Primary,
26 Secondary
27 Escapement,
28 Balance,
29 Pendulum
30 Actuated,
31 Regulated,
32 Synchronizers,
33 Circuit controllers,
34 Hand setters
35 Systems,
36 Opposed lever,
37 Sliding connection,
38 Striking
39 Intermittent signal,
40 Winding
41 Self,
42 Pneumatic,
7 Trains
8 Striking
9 Cam controlled,
10 Repeating
11 Double snail,
12 Musical,

58. HOROLOGY—Continued.

Clocks

Trains
Striking
13 Chimes,
14 Graphophone,
15 Turnbacks,
16 Alarm
17 Eight-day,
18 Repeating,
19 Electric
20 Let-off
21 Alarm-winding arbor,
22 Let-off,
46 Winding
48 Motors, spring,
51 Leveling devices,
52 Frames,
53 Cases
54 Cylindrical,
55 Materials,
56 Supports.
57 **Watches**
58 Calendar,
100 Toy,
74 Stop
75 Split seconds,
76 Couplers, pivoted,
77 Couplers, sliding,
78 Positive
79 Balance stop,
60 Repeaters
61 Double snail
62 Trains,
59 Movements,
63 Stem winding and setting
64 Lever set
65 Clutch,
66 Yoke

58. HOROLOGY—Continued.

Watches

Stem winding and setting
67 Pendant-set
68 Clutch,
Yoke
69 Double gear
70 Cam,
71 Lever,
72 Single gear,
73 Stem winding,
80 Winding
82 Self-winders,
81 Lever,
83 Overwinding preventers,
84 Attached keys,
85 Indicator,
86 Barrels
87 Mainspring fasteners,
88 Cases
89 Convertible,
90 Dust proof,
91 Bezels and crystals,
92 Centers
93 Integral,
94 Movement rings,
95 Pendants
96 Bow fasteners
97 Pin or screw,
98 Sleeve,
99 Stem fasteners,
100 Screw,
101 Springs
102 Cover connections,
103 Hinges,
104 Plates,
105 Protectors.

58. HOROLOGY—Continued.

106.5 **Antimagnetic devices.**
107 **Balances**
108 Compensating,
109 Regulating
110 Compensating,
111 Rack and pinion,
112 Screw,
113 Curb pins,
114 Hairsprings
115 Collets and studs.
116 **Escapements**
117 Balance
118 Chronometer,
119 Cylinder,
120 Duplex,
121 Lever
122 Straight line,
123 Pendulum
124 Gravity.
125 **Dial trains.**
126 **Dials and hands.**
127 **Dials**
128 Shifting figures.
129 **Pendulums**
130 Metronome,
131 Torsion,
132 Regulating,
133 Compensation,
134 Beat adjusters,
135 Balls.
Safety wheels
136 Barrel,
137 Center.
138 **Cannon pinions.**
139 **Arbors and pinions.**
140 **Staffs and bearings.**

59 CHAIN, STAPLE, AND HORSE-SHOE MAKING

1 **Chain making**
2 Bead chain,
3 Loop interlocked,
4 Roller chain,
5 Sprocket chain
6 Sheet metal,
7 Link assembling,
8 Blanks and processes,
9 Swivel making,
10 Weldless
11 Link separation,
12 Blanks and processes,
13 Sheet metal
14 Prong connected,
15 Stamping and bending,
16 Combined machines
17 Coiling, cutting, bending, curbing,
18 Feeding, cutting, bending, welding,
19 Feeding, cutting, bending, wrapping,
20 Coiling, cutting, assembling,
21 Bending and eye forming,
22 Bending and welding,
23 Cutting and bending
24 Automatic feed
25 Link assembling,
26 Winding and welding,
27 Bending,
28 Curbing,
29 Sizing and trimming,
30 Swaging and shaping,
31 Welding
32 Rotary feed,
33 Dies,
34 Holding devices,

59. CHAIN, STAPLE, AND HORSE-SHOE MAKING—Continued.

Chain making
35 Blanks and processes.
36 **Horseshoe making**
37 Combined machines
38 Cutting, bending, shaping, punching, and creasing
39 Calk and clip bending and forming,
40 Reciprocating jaw or die block
41 Reciprocating punch and creaser.
42 Rotary die block
43 Rotary punch and creaser,
44 Bending, shaping, punching, and creasing
45 Reciprocating jaw or die block
46 Reciprocating punch and creaser,
47 Rotary die block
48 Rotary punch and creaser,
49 Cutting, bending, shaping
50 Reciprocating die block,
51 Rotary die block,
52 Bending and shaping
53 Reciprocating die block,
54 Rotary die block,
55 Shaping, punching, and creasing,
56 Bending,
57 Punching and creasing,
58 Swaging and shaping,
59 Trimming and bur removing,
60 Dies and tools
61 Processes,
62 Blanks and bars
63 Rolling
64 Processes,

59. CHAIN, STAPLE, AND HORSE-SHOE MAKING—Continued.

Horseshoe making
65 Calk and clip bending, forming, sharpening, welding,
66 Calk making
67 Blanks and bars,
68 Processes,
69 Calks.
70 **Ox-shoe making.**
71 **Staple making**
72 Sheet metal,
73 Cutting, bending, barbing,
74 Cutting, bending, point forming,
75 Cutting and bending
76 Rotary former,
77 Blanks and processes.
78 **Chains**
78.1 Conduit.
79 Elastic,
80 Ornamental
81 Multistrand roller,
82 Links,
83 Wire,
84 Links
85 Detachable
86 Shackles,
87 Double lap
88 Pivoted,
89 Pivoted closure,
90 One piece
91 Sheet metal,
92 Wrapped and twisted,
93 Attachments,
95 Swivels.

60 POWER PLANTS.

1 **Miscellaneous.**
2 **Combined with heater**
Heating water
4 By furnace gases and steam,
5 By steam.
6 **Combined types**
7 With mechanical motor
8 Gravity
9 Oscillating,
10 Rotary,
11 Internal combustion and turbine
12 Fluid transmission,
13 Reexpansion,
14 Internal combustion and fluid pressure
15 Reexpansion,
16 Convertible,
17 Boosting
18 Convertible pump,
19 Fluid transmission,
20 Fluid pressure and turbine
21 Reexpansion.
22 **Buoyancy.**
23 **Expansion and contraction**
24 Hot-air type
25 With vapors.
26 **Utilizing natural heat.**
27 **Internal generation**
28 Combustion
29 Exhaust treatment
30 Fluid mingling,
31 Cooling,
32 Suction,
33 Hot air,
34 Cooling,
35 Special motive fluid.
35.5 **Reaction motors**
35.6 Combustion products.

60. POWER PLANTS—Continued.
36 **Special motive fluid**
37 Chemical,
38 Separate fluids.
39 **Mixed fluids**
40 Turbine
41 Combustion products
42 Water injected,
43 Semicompound,
44 Combustion products
45 Water injected
46 Flasher,
47 Semicompound
48 Automatic.
49 **Separate fluids.**
50 **Chemical.**
51 **Hydraulic type**
52 Fluid transmission
53 Rotary
54 Turbine,
54.5 Pulsator type
54.6 Pulsators,
55 Turbine
56 Heated.
57 **Pneumatic type**
58 Reexpansion,
59 Heated,
60 Vacuum,
61 Convertible pump,
62 Fluid transmission
62.5 Pulsator type
62.6 Pulsators.
63 **Hot water charged.**
64 **Exhaust treatment**
65 Reexpansion
66 Tapping
67 Turbine,
68 Convertible,
69 Multiple motor
70 Turbine,

60. POWER PLANTS—Continued.
Exhaust treatment
Reexpansion
73 Turbine,
88 Delivery to furnace.
89 Tapping,
90 Flue ejection
91 With cooling,
92 Regeneration,
93 Fluid mingling
94 Liquid,
95 Cooling
96 By air.
97 **Multiple motor**
102 Turbine.
104 **Superheating.**
105 **Regulation**
106 Furnace and feed water,
107 Feed water.
108 **Turbine.**

61 HYDRAULIC AND EARTH ENGINEERING.

1 **Water control**
2 Channels
3 Forming and preserving
4 Jetties, groins, and break-waters
5 Portable,
6 Fluid breakwaters,
7 Canals
8 Locks
9 Lifting,
10 Drainage
11 Substratum,
12 Irrigation
13 Subirrigation,
14 Flumes
15 Sheet metal,
16 Culverts,
17 Intakes,
18 Spillways,
19 Power
20 Tide and wave,
21 Fish ways,
22 Water gates
23 Uniform discharge,
24 Horizontally swinging,
25 Vertically swinging
26 Overflow,
27 Collapsible,
28 Sliding,
29 Removable,
30 Dams and levees
31 Cores,
32 Hollow,
33 Tension stayed,
34 Cofferdams.
35 **Earth control**
36 Solidifying or thawing earth,

61. HYDRAULIC AND EARTH ENGINEERING—Continued.

Earth control
37 Revetments
38 Mattresses,
39 Retaining walls,
40 Shafts
41 Shaft lining and excavation sheathing,
42 Tunnels
43 Sectional,
44 Subways,
45 Tunnel lining.
46 **Stable structures in shifting media**
47 Cribbing,
48 Wharves
49 Retaining-wall type,
50 Foundations
51 Underpinning,
52 Pier,
53 Piles
54 Protected,
56 Concrete
57 Formed in situ,
58 Sheet piling
59 Concrete,
60 Metallic
61 [and I sections,
62 Head-and-claw interlock.
63 **Apparatus**
64 Drydocks
65 Lifting,
66 Keel and bilge blocks.
67 Marine ways,
68 Ship caissons,
69 Diving
70 Suits
71 Rigid elements,
72 Pipe and cable laying,

61. HYDRAULIC AND EARTH ENGINEERING—Continued.

Apparatus
73 Pile drivers
74 Monkey,
75 Swinging hammer,
76 Piston,
77 Caps, bands, and followers,
78 Preparatory piles
79 Expanding core,
80 Water jet,
81 Caissons
82 Portable,
83 Air locks,
84 Tunnel
85 Shields.

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62 REFRIGERATION.

1 **Miscellaneous.**
2 **Automatic control**
3 Compressor-condenser-expander circuit
4 Motor control,
5 Still circuit,
6 Chamber cooler,
7 Fluid cooler,
8 Expander.
Body coolers
9 Ice receptacle.
10 **Butter dishes.**
11 **Tables.**
12 **Rinks.**
13 **Wagons, ice.**
14 **Ships, ice.**
15 **Cars, ice**
16 Top and end ice box,
17 Top ice box
18 Central ice box
19 End ice box
20 Drip cooled,
21 Cooled air tubes,
22 Bottom ice box,
23 Ice casing,
Ice box
24 Air-pump circuit.
Cars
25 Liquefied gas.
26 **Buildings, ice**
27 Top ice box
28 Drip cooled,
29 Central ice box,
Ice box
30 Air-pump circuit.
31 **Refrigerators, ice**
32 Barrel
33 Liquid cooler,

62. REFRIGERATION—Continued.
Refrigerators, ice—Continued.
34 Bottle
35 Gravity feed,
36 Sideboard,
37 Display
37.1 Top ice cooled,
37.2 End ice cooled,
37.3 Bottom ice cooled,
38 Liquid cooler
39 Filter
40 Drip tank,
41 Pressure,
42 Flat plate,
43 Coil
44 Bottle type,
45 Top ice box,
46 Top ice box
47 Valved
48 Door operated,
49 Rotary,
50 Superposed,
51 End
52 Drip tank,
53 Drip cooled,
54 Drip tube,
55 Drip tank
56 Filter,
57 Drip casing,
58 Central ice box
59 Rotary,
60 Drip tank,
61 End ice box
62 Drip cooled,
63 Bottom ice box.
64 Valved
65 Door operated,
66 Drawer operated,
67 Ice-cooled air pipe,
68 Ice casing,
69 Ice tank,

62. REFRIGERATION—Continued.
Refrigerators, ice—Continued.
70 Drip cooled,
71 Elevator,
72 Air-pump circuit,
73 Evaporative,

75 Receptacle
76 Bottle
77 Rotary,
78 Corpse,
79 Liquid cooler,
80 Top ice box
81 Superposed,
82 Drip cooled,
83 Central ice box
84 Drip cooled,
85 End ice box.
86 Bottom ice box,
87 Ice casing,
88 Covers.
89 **Refrigerators**
89.5 Display
89.6 Top cooling means,
90 Evaporative
91 Receptacle,
91.5 Solidified gas,
92 Liquefied gas
93 Absorber,
94 Chemical,
95 Indirectly cooled
96 Air cooled
97 Expansion in chamber
98 Expansion motor,
99 Surface cooler
100 Corpse,
101 Liquid circuit,
102 Air-pump circuit,
103 Condenser,
104 Liquid-contact cooler.
105 **Ice-making apparatus**

62. REFRIGERATION—Continued.
Ice-making apparatus—Continued.
106 Freezers
107 Spray,
108 Tank,
108.5 Molds,
109 Atmospheric
110 Tank,
111 Separator
112 Heated cutter,
113 Can heater.
114 **Congelation apparatus.**
115 **Compressor-condenser-expander circuit**
116 Refrigerator type
117 Car.
118 **Still-condenser-expander circuit**
119 Absorber
119.5 Inert fluid.
120 **Absorbing-still condensing expander.**
120.5 **Absorbent return.**
121 **Gas solidifiers.**
122 **Gas liquefiers and separators**
123 Expansion motor.
124 **Liquid separators.**
125 **Liquefaction and expansion**
126 Expanders
127 Expansion valves.
128 **Air and liquid coolers.**
129 **Air coolers**
130 Ice
131 Air pump,
132 Contact
133 Air pump
134 Indirect,
135 Air pump
136 Expansion motor
137 Condenser,
138 Water contact,
139 Evaporative,
140 Condensers.

62. REFRIGERATION—Continued.

141 Liquid coolers
142 Ice
143 Bottle type,
144 Barrel,
145 Filter,
146 Contact,
147 Tube,
148 Flat plate,
149 Agitator,
150 Expansion motor,
151 Film plate,
152 Vacuum
153 Hydroscopic,
154 Evaporative
155 Pressure,
156 Air pump,
157 Tank
158 Gas expansion,
159 Air injected,
160 Cooling-liquid circuit
161 Agitator,
162 Spur tube,
163 Vertical plate
164 Thawer,
165 Bottom plate,
166 Agitator,
167 Thawer.
168 Evaporative coolers
169 Vacuum.
169.1 Supports.
170 Processes
171 Cooling chambers,
172 Ice making,
173 Congelation
174 Ice cream,
175 Liquefaction of gases
175.5 Separation,
176 Cooling air,
177 Cooling liquids,
178 Cooling by vaporization
179 Absorber.

63 JEWELRY.

1 Combination articles.
2 Miscellaneous.
3 Bracelets
4 Chain,
5 Expansible
6 Two part
7 Single hinge
8 Spring,
9 Multiple hinge,
10 Swiveled,
11 Resilient.
12 Earrings
13 Pendent jewel,
14 Nonpiercing.
15 Finger rings
16 Adjustable and divided,
17 Guards.
18 Lockets
19 Hinged covers.
20 Ornamental pins.
21 Watch and chain attachments
22 Bars,
23 Charms,
24 Safety watch guards
25 Automatically operated.
26 Gem settings
27 Crown,
28 Multiple,
29 Detachable
30 Exhibiting,
31 Movable.
32 Gems.

64 MACHINE ELEMENTS, SHAFTING AND FLEXIBLE SHAFT COUPLINGS.

1 Rotary shafting
2 Flexible,
3 Housings,
4 Shaft and housing connections,
5 Gudgeons.
6 Flexible shaft couplings
7 Head and socket
8 Axial displacement,
9 Intermeshing teeth or jaws,
10 Flange and pin,
11 Yielding element
12 Link or band,
13 Disc,
14 Intermeshing teeth or jaws,
15 Metallic spring,
16 Intermediate grooved or ribbed block,
17 Intermediate radial pivot member
18 Gimbal ring,
19 Intermediate link or chain,
20 Intermediate crank or angled pin,
21 Uniform angular velocity,
22 Shaft to wheel universal,
Aligned rotary elements
23 Axial displacement,
24 Rotary displacement
25 Speed controlled,
26 Fluid drive,
27 Resilient drive,
28 Overload release
29 Cam and spring-pressed follower,
Friction drive,
30 Offset shafts,
31 Casings.

65 KITCHEN AND TABLE ARTICLES.

5 Casters
55 Rotary.
10 Compound tools.
45 Condiment holders
57 Pulverizing
12 Culinary.
13 Cups
58 Collapsible.
16 Dish covers.
61 Dish stands.
15 Dishes and plates
59 Covered,
60 Pivoted covers.
20 Dust pans
62 Brush attachments,
63 Foot pieces.
22 Egg cups.

28 Ladles.
29 Napkin holders.
31 Pitchers
67 Compartment,
66 Spaced wall.
65 Racks and rests.
36 Scoops.
46 Stopper extractors
47 Hook,
48 Screw
49 Lever operated,
50 Rotary,
51 Screw and lever.
53 Trays
54 Attaching devices.

66 TEXTILES, KNITTING.

1 **Miscellaneous.**
1.5 **Reknitting.**
2 **Darning.**
3 **Looper pin and hook**
4 Hand.
5 **United needle knitting and independent needles**
6 With independent needle knitting.
7 **Independent-needle machines**
8 Circular
9 Incorporating unknit or fleece-type materials
10 Warp and weft type,
11 Laterally displaceable needle,
12 Varied needle,
13 Special-type machines
14 Double-ended needle,
15 Swing jack needle, dial and cylinder,
16 Axially reciprocating actuator,
17 Multiple-needle bank
18 Opposed conical,
19 Dial and cylinder
20 Varied needle, frequently with special stitch,
21 Pocket welt, frequently with special stitch
22 Two-ply simultaneously knit,
23 With stitch-length variation,
24 To or from rib or rib change,
25 Special stitch
26 Racking,
27 Stitch-length variation,
28 Dial and cylinder connections,
29 To or from rib or rib change,
30 Narrowing and widening,

66. TEXTILES, KNITTING—Contd.

Independent-needle machines

Circular
31 Dial
32 Narrowing and widening
33 Laterally displaceable needle,
34 Conical,
35 Laterally displaceable needle
36 Special stitch,
37 Narrowing and widening,
Varied needle
38 Separate cam paths
39 Narrowing and widening,
40 Special stitch
41 Welt or antiravel,
42 Multifeed
43 Suture forming,
44 With varied latch,
45 Hand coverings, forming,
46 Narrowing and widening
47 With needle-actuated pickers
48 Rotary needle carrier,
49 Splicing,
50 Special stitch,
51 Narrowing and widening
52 With needle-actuated pickers
53 Needle-actuated pickers,
54 Stitch-length variation
55 Axial cylinder adjustment,
56 Cylinder movement or speed change,
57 Needle-cam construction,
58 Preparing for transfer
59 Including axial cylinder movement,
60 Straight
61 Incorporating unknit or fleece-type materials,
62 Special-type machines
63 Double-ended needle,

66. TEXTILES, KNITTING—Contd.

Independent-needle machines

Straight
64 Multiple-needle bank
65 Hand coverings, forming,
66 Laterally displaceable needle
67 Narrowing and widening,
68 Varied needle,
69 Racking,
70 Narrowing and widening,
71 With stitch-length variation,
72 Laterally displaceable needle
73 Narrowing and widening,
74 Varied needle,
75 Special stitch,
76 Narrowing and widening,
77 With stitch-length variation,
78 Needle-cam construction.

United needle machines

79 Circular
80 Incorporating unknit or fleece-type materials,
81 Warp,
82 Straight
83 Incorporating unknit or fleece-type materials
84 Warp
85 Crochet type,
86 Warp
87 Multiple-needle bank,
88 Multiple-needle bank,
89 Narrowing and widening, frequently with loop traversing.
90 **Needle cooperating elements**
91 Pile loop formers
92 For needle dial and cylinder machines,
93 Radially slidable,
94 Wheels, nonlooping, fleece type,

66. TEXTILES, KNITTING—Contd.

Needle cooperating elements

95 Loop traversers or holders
96 For straight machines,
97 Wheel,
98 Beard pressers
99 With press-off preventers,
100 Needle displacement,
101 Individually movable
102 Sliding,
103 Special stitch wheels,
104 Sinkers or web holders
105 Wheel,
106 Pivoted,
107 Radially slidable
108 Movable cam sections,
109 For straight machines
110 Traversely slidable,
111 Pivoted latch actuators
112 Gap closers,
113 Wheel.
114 **Needle beds**
115 Independent needle.
116 **Needles**
117 Hand
118 Crochet,
119 Spring beard,
120 Sliding latch,
121 Pivoted latch
122 Latch pivots,
123 Shanks
124 Self-frictioning.
125 **Feeding**
126 Traversing guides, straight machine
127 Alternately idled guides,
128 Partial traverse
129 With additional strand,
130 Shock reducers,
131 Close-feed devices,

66. TEXTILES, KNITTING—Con.

Feeding

132 Positive,
133 Additional strand idled guide
134 With clamp or cutter,
135 Needle-wrapping type,
136 Plating
137 Reversible,
138 Alternately idled guides
139 Sliding,
140 With clamp or cutter,
141 Nonidling or nonplating guides
142 With clamp or cutter
143 Starting by strand interengagement
144 Uniting,
145 With clamp or cutter,
146 Strand tensions.

147 **Fabric manipulation**

148 Transferring fabric,
149 Take-ups
150 Special-shape work,
151 Winding, from rotary needle bank,
152 Continuous
153 From rotary needle bank.

154 **Pattern mechanism**

155 With multiplier,
156 Patterns.

157 **Stopping**

158 Strand controlled
159 With strand severing,
160 With tension relieving
161 Electrical,
162 Moving actuator,
163 Electrical,
164 Moving actuator,
165 Needle cooperating element controlled,
166 Fabric controlled,

66. TEXTILES, KNITTING—Con.

Stopping

167 Length control.

168 **Cleaning attachments.**

169 **Fabrics or articles**

170 Articles
171 Garments
172 Border or antiravel portions, frequently hosiery
173 Pocket welt,
174 Hand coverings,
175 Union, trunk and nether,
176 Trunk,
177 Nether
178 Hosiery
179 Suture seam,
180 Ornamental stitch
181 With mock seam,
182 Reinforced,
183 Combined foot structure and fashioned calf
184 With heel or toe,
185 Foot structure
186 With heel or toe
187 Heel or toe,
188 With rib leg and foot,
189 Fashioned.

190 Incorporated unknitted materials
191 Fleece or pile type,
192 Warp
193 With crochet stitch,
194 Fleece or pile type,
195 Warp,
196 Multi-ply
197 Rib,

198 Traversed or doubled loop
199 To or from rib or rib change,
200 Rib,
201 Strand change,
202 Materials.

67 ILLUMINATING BURNERS.

1 **Miscellaneous**
2 **Combined gas and vapor.**
3 **Igniting devices**
4 Cigar
4.1 Pyrophoric,
5 Hydrogen platinum,
6 Implements
6.1 Pyrophoric,
7 Pocket
7.1 Pyrophoric,
9 Lamp
10 Fulminating,
10.1 Pyrophoric,
11 Aperture,
12 Match scratchers,
13 Separable,
14 Gaseous
15 Conducting tube,
16 Pilot
Pressure operated
17 Multiple fluid,
18 Single fluid,
19 Catalytic,
20 Fulminating,
20.1 Pyrophoric.
21 **Solid fuel**
22 Candles
22.5 Ornamental,
23 Candlesticks
24 Extinguishers,
25 Candelabra,
25.5 Christmas-tree.
26 Miners',
27 Maintained flame level,
28 Flash lights
29 Shutter release and light,
30 Hoods,
31 Electric ignition,
32 Flame ignition,
33 Fulminant ignition,

67. ILLUMINATING BURNERS—Con.

Solid fuel

34 Magnesium-strip type.

35 **Liquid fuel**

36 Burners
37 Vapor
38 Blue-flame wick type,
39 Multiple fluid,
40 Retort
41 Starters,
42 Heating jet
43 Air mixing,
44 Heat conducting
45 Air mixing,
46 Air mixing
47 Internal,
48 Overlying,
49 Side,
50 Inverted,
51 Floating,
52 Forced draft,
53 Wick type
54 Multiple,
55 Chimneyless,
56 Argand
57 Lateral air inlet,
58 Central draft
59 Drawbar,
60 Rack bar,
61 Screw rod,
62 Swiss screw,
63 Air distributors,
64 Returned wick,
65 Wick raisers,
66 Wick stops,
67 Wick inserters,
68 Wick trimmers,
69 Wicks
70 Multiple piece,
71 Glass cone,

67. ILLUMINATING BURNERS—Con.

Liquid fuel
Burners
Wick type
72 Air distributers,
73 Extinguishers
74 Fuel exhaustion,
75 Pneumatic,
76 Liquid,
77 Mechanical
78 Cap
79 Double wing,
80 Sliding sleeve,
81 Fonts
82 Independent,
83 Collars,
84 Drip catchers,
85 Filling devices,
86 Vents.
87 Gaseous-fuel burners
88 Incandescent
100 Mantle making,
89 Calcium-light type,
90 Pressure
91 Self-intensifying,
92 Resilient support,
93 Combined upright and inverted.
94 Inverted,
95 Inclined,
96 Upright
97 Preheater,
98 Mantles,
99 Mantle compositions,
101 Mantle support
102 Inclosed,
103 Inverted,
104 Resilient,

67. ILLUMINATING BURNERS—Con.

Gaseous-fuel burners
105 Acetylene,
106 Annular,
107 Multiple fluid,
108 Regenerative
109 Gas,
110 Intermittent
111 Self-operated,
112 Tips,
113 Automatic cut-offs
114 Draft,
115 Pressure,
116 Thermostatic
117 Self-setting,
118 Regulating
119 Automatic,
120 Fixed,
121 Manual.

68 TEXTILES, FLUID TREATING APPARATUS.

1 Waste reclaiming apparatus.
2 Carbonizing apparatus.
3 Machines
4 Convertible,
5 With gas, steam or mist treating
6 Static devices
7 With fabric carrying cylinder,
8 Textile on cylinder,
9 With successive fluids and plural tubs
10 Relatively transferable textile holder,
11 Plural tubs and relatively transferable textile worker,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
12 Single tub and automatic sequential operation,
13 Combined
14 With scrub-board,
15 With tank heater
16 Tumbler drum,
17 With soap supply,
18 With solvent recovery,
19 With fluid extractor
20 Gaseous drier,
21 Squeezer extractor
22 Roller,
23 Centrifugal extractor
24 Horizontal axis tumbler and centrifuge,
25 Shiftable to vertical axis centrifuge,
26 Independent vat and centrifuge,
27 Plural fluid treating machines,
28 Combined operations
29 With free element,
30 Tumbling, scrubbing and squeezing,
31 Scrubbing and squeezing
32 One work element reciprocable longitudinally of a roll axis,
33 Cooperating movable work elements
34 One movable with tub,
35 Single movable work element
36 Pivotally movable,
37 Rectilinearly movable,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
Combined operations
38 Scrubbing and liquid flowing
39 Endless apron and scrubber
40 Scrubber reciprocable longitudinally of apron,
41 Horizontal axis pivoted carrier-scrubber,
42 Carrier roll and platen,
43 Squeezing and liquid flowing
44 Squeezer and endless belt
45 Single endless belt,
46 Roll and carrier roll,
47 Roller bed and carrier roll,
48 Movable tub, tray or cage
49 With shuttle squeezer,
50 Vertically movable,
51 Mechanical liquid pump,
52 Squeezing and dragging,
53 Impulsing and liquid flowing,
54 Impulsing and scrubbing,
55 Dragging and liquid flowing,
56 Dragging and scrubbing
57 Drag on vertical axis,
58 Tumbling and liquid flowing
59 Spurting nozzle, thermal flow,
60 Tumbling and scrubbing,
61 Tumbling and squeezing,
62 Liquid flowing and liquid applying,
63 Scrubbing
64 Scrubber and bed, reciprocatory
65 Bed reciprocable about a roll periphery,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
Scrubbing
Scrubber and bed, reciprocatory
66 Both movable
67 On horizontal axis
68 Vertical scrubbers,
69 Unitary tub and bed,
70 On vertical axis
71 Tub movable with scrubber,
72 Rectilinearly
73 In vertical plane,
74 Scrubber, only, movable
75 On horizontal axis
76 Plate scrubber transverse to axis,
77 Plural scrubbers
78 Individually pivoted scrubbers,
79 On vertical axis
80 Downwardly directed scrubbing face,
81 Rectilinearly,
82 Bed, only, movable
83 On vertical axis,
84 Rotary
85 Brush roller and roll,
86 Roll and platen
87 Brush roll or brush platen,
88 Resiliently mounted platen,
89 Vertical axis scrubber,
90 Horizontal axis scrubber,
91 Fixed scrubber and bed, movable carrier,
92 Scrubbers,
93 Scrubber bed or cage,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
94 Squeezing
95 Squeezer and textile cover,
96 Deformable receptacle,
97 Roll type
98 Planetary,
99 Roll and roll,
100 Roll and roller bed
101 Resiliently mounted roller bed,
102 Rectilinearly reciprocable roll and bed
103 Fixed bed
104 Single roll,
105 Fixed axis roll and reciprocable bed,
106 Oscillating roll and bed
107 Single roll,
108 Chasers
109 Non-rotatable bed,
110 Squeezer and bed, both movable
111 Vertically reciprocable squeezer and vertically pivoted bed,
112 Opposed receding and approaching squeezers,
113 Squeezer, only, movable
114 Cradled,
115 Plural horizontally pivoted squeezers
116 Bi-lateral squeezing faces,
117 Single horizontally pivoted squeezer
118 Bi-lateral squeezing faces,
119 Edge pivoted horizontal plate,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
Squeezing
Squeezer, only, movable
120 Rectilinearly movable squeezer
121 Bi-lateral squeezing faces,
122 Vertically
123 With squeezer displacement,
124 Successively acting squeezers,
125 Mountings
126 For roll squeezers,
127 Squeezer rolls,
128 Squeezer roll strippers,
129 Non-rotary squeezers
130 With plungers or valves,
131 Impulsing
132 Oscillatory or rotary on vertical axis
133 Bottom drive,
134 Impellers,
135 Dragging
136 Oscillatory or rotary on vertical axis
137 Top drive,
138 Dollies,
139 Tumbling
140 Cage type tumbler supports, bearings or drive,
141 Wobbly cage,
142 Cage construction
143 Compartmented,
144 Imperforate receptacle type
145 Compartmented,
146 Fixed inclined axis,
147 Liquid flowing

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
Liquid flowing
148 Liquid displacement and movable cage or carrier
149 Rotatable skein - supporting sticks,
150 Wound package, central liquid flow,
151 Vertically pivoted cage-pump or carrier-pump,
152 Movable cage or perforate tray
153 Oscillatable cage or tray
154 Vertical axis,
155 Rectilinearly reciprocable cage or tray
156 Vertically reciprocable,
157 Movable carrier in vat
158 Continuous textile feed and discharge,
159 Skein carrying stick or frame in liquid receptacle
160 Rotatable skein stick
161 With skein stretching means,
162 Rotatable carrier for sticks or frames
163 Rotatable skein stick
164 With skein stretching means,
165 Reciprocable carrier for sticks or frames
166 Rotatable skein stick,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
Liquid flowing
Movable carrier in vat
Skein carrying stick or frame in liquid recepacle
167 Traversing skein stick
168 Endless belt stick carrier
169 With skein stretching means,
170 Vertically reciprocable carrier,
171 Movable liquid receptacle
172 Rockable or oscillatable liquid receptacle
173 Fixed axis
174 Vertical axis,
175 Fixed liquid receptacle
176 Helical textile course,
177 Web or rope pleating in receptacle
178 Conditioning chutes,
179 Conditioning chutes,
180 Jiggers,
181 With liquid supply and efflux
182 Rotating stock strainer,
183 With gas supply to liquid,
184 With liquid pump
185 And interconnecting sampler
186 And textile holddown,
187 And textile holddown,
188 Skein supporting sticks,
189 Wound package, central liquid flow,
190 Surgers,
191 Thermal flow
192 Surgers,
193 Tubular conductors,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Machines
Liquid flowing
Fixed liquid receptacle
194 Textile holddowns,
195 False bottoms,
196 Covers,
197 Elevatable textile supports,
198 Hollow wound package holders,
199 Carriers,
200 Liquid applying
201 Needle injectors,
202 Roller
203 Intermittent liquid applicator,
204 Endless belts,
205 Tricklers and sprinklers
206 With skein supporting sticks,
207 Liquid supply or vapor supply to liquid,
208 Drains and overflows,
209 Fire or explosion preventers or fume removers,
210 Loaders, unloaders or dumpers,
211 Limited area clamps,
212 Elements.
213 Implements
214 Combined,
215 Pounders
216 With plunger
217 And valve,
218 Valved,
219 With material receptacle,
220 Scrubbers,

222 Steamers,
223 Wash-boards

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Implements
Wash-boards
224 Brandboards, soap holders and soap supply,
225 Splash guards and breast boards,
226 Rubbing surfaces
227 Brush type,
228 Sheet or slab
229 Surface design or elevation,
230 Of slats, bars, or tubes,
231 Of rollers,
232 Tubs
233 With scrub surfaces,
234 With wringer support.
235 Accessories
236 Combined wash bench and wringer support,
237 Wash tub or wash boiler attachments
238 Wringer supports,
239 Wringer supports,
240 Clothes supporting or spotting boards,
241 Wringers
242 Flexible diaphragm squeezers,
243 Twisters,
244 Roller type
245 Combined
246 With bench,
247 Enclosable,
248 Rolls in horizontal plane,
249 Interconnected functional units
250 Guide, roll pressure and clamp,
251 Roll pressure and clamp
252 Guide and clamp,

68. TEXTILES, FLUID TREATING APPARATUS—Continued.

Accessories
Wringers
Roller type
Interconnected functional units
253 Roll pressure and drive,
254 Drive and drain,
255 Drive and wringer rotation lock,
256 Pressure applying or release mechanisms
257 Roll separation against spring pressure,
258 Power mechanisms,
259 Release through abnormal roll separation,
260 Plural manipulative pressure adjustors
261 And auxiliary release,
262 Single manipulative pressure adjustor
263 And auxiliary release,
264 Guards, guides and feeds
265 Movable guide or feed
266 Feed or idler roll,
267 Apron between rolls,
268 Apron to or from rolls,
269 Gearing and bearings,
270 Strippers,
271 Drains,
272 Mountings
273 On horizontal axis,
274 On vertical axis,
275 On horizontal track,
276 Clamps,
277 Rolls.

69 LEATHER MANUFACTURERS

1 **Machines**
1.5 Belt stretching
3 Horse-collar shaping
4 Horse-collar stuffing
17 Strap finishing
18 Tack leathering
2 Cutting and impressing
6 Rounding
7 Seam pressing
8 Forming and pressing
9 Skiving and splitting
9.5 Rotary tubular knife
10 Belt knife
16 Rotary disk knife
15 Reciprocating knife
11 Fixed knife
12 Reciprocating feed
13 Roller feed
14 Trimming attachments
23 Fur treatment
24 Coarse hair removing
25 Clipping
26 Plucking
27 Fur orienting or smoothing
28 With fluid
29 Fluid treating apparatus
30 Rotary drum
31 Liquor agitation
32 With hide, skin or leather moving means
33 Hide folding, flexing, suppling or crumpling
34 Staking
35 Boarding
36 Band type knife
37 Rotary tool
38 With tool grinder or cleaner
39 Rotating about vertical axis, horizontal work support

69 LEATHER MANUFACTURES—Con.

Machines
Rotary Tool
40 With additional translating motion during treatment
41 Belt type work support
42 Cylinder work support
43 Smooth roll only
44 Moving work support
45 Pivoted tool
46 Translating tool
47 Moving work support
48 Presses
19 **Work holders**
20 **Tools**
21 **Articles and processes**
22 Fur

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70 LOCKS

1 Miscellaneous
1.5 Attack actuated defeating mechanisms
1.7 With reset mechanisms

70. LOCKS—Continued
2 Hasp
3 Combination lock
4 Hasp carried
5 Keeper carried
6 Key lock
7 Hasp carried
8 Keeper encasing
9 Dead bolt
10 Latching bolt
11 Dead bolt
12 Latching bolt
13 Keeper carried
14 Portable
15 Fetters
16 Manacles and cuffs
17 Nippers
18 Shackles
19 Clamps
20 Padlocks
21 Combination and/or key controlled
22 Combination controlled
23 Non-shackle type
24 Rigid shackle
25 Sliding
26 Removable
27 Pivoted
28 Sliding detent
29 Swinging detent
30 Flexible shackle
31 Key Controlled
32 Non-shackle type
33 Housing extension and cooperating detent
34 Single stem or shank

70. LOCKS—Continued
Portable
Padlocks
Key controlled
35 Rigid shackle
36 Divided shackle
37 Divided jaw type
38 Sliding
39 Removable.
40 Arcuate locus
41 Pivoted
42 Sliding detent
43 Free end only engaged
44 Pivoted end only engaged
45 Swinging detent
46 Free end only engaged
47 Pivoted end only engaged
48 Arcuate locus
49 Flexible shackle
50 With seal
51 Parts, accessories, attachments and adjuncts
52 Housings
53 Shackles
54 Protectors
55 Sheaths
56 Shields or canopies
57 Special application
58 For portable articles
59 Canes, umbrellas, apparel
60 Robes
61 Tools
62 Supporting stands
63 Receptacle
64 Bag
65 Collapsible throat
66 Pivoted rigid jaw
67 Attaché- or brief-case, portfolio
68 Interengageable talon type

70. LOCKS—Continued
Special application
For portable articles
Receptacle
69 Trunk and/or suit-case
70 Projecting fixed or movable lug type
71 Bolt type
72 Hasp controlled
73 Link and lever or hasp type
74 Hasp type
75 Hasp carried lock
76 Loop type
77 For closures
78 Cabinet
79 Projecting lug type
80 External catch
81 Projectable bolt
82 Multiple bolts
83 Multidirectional displacement
84 Swinging and hooked end
85 Drawer
86 Dead-bolt
87 Till
88 Combination
89 Window
90 Sliding sash
91 Door
92 Emergency exit
93 Links to limit opening
94 Braces
95 Sliding door
96 Extending keeper
97 Rigid or fixed
98 Extensible
99 Projecting or extending bolt
100 Projectable bolt
101 Swinging door

70. LOCKS—Continued
Special application
For closures
Door
Swinging door
102 Interfitting lock housing and keeper
103 Multiple dead-bolts
104 Sliding dead-bolt
105 Swinging dead-bolt
106 Locking latch bolt, biased
107 Combined dead-bolt and latching bolt
108 Multiple dead-bolts
109 Multiple latch bolts
110 Dead-bolt dogged latch bolt
111 Manually dogged latch bolt
112 Dead-bolts
113 Multiple
114 Sliding and swinging
115 Combination operable only
116 Key operable only
117 Sliding and rotary
118 Sliding
119 Combination operable only
120 Key operable only
121 Swinging
122 Combination operable only
123 Key operable only
124 Single
125 Sliding and swinging
126 Combination operable only
127 Key operable only
128 Sliding and rotary
129 Sliding
130 Multidirectional displacement

70. LOCKS—Continued.
Special application
For closures
Door
Swinging door
Dead-bolts
Single
Sliding
131 Keeper interlocking
132 Curved
133 Combination operable only
134 Key operable only
135 Swinging
136 Keeper and housing interlocking
137 With hooked end
138 Combination operable only
139 Key operable only
140 Screw
141 Locking latch bolts, biased
142 Keeper interlocking
143 Projectable beyond normal biased position
144 Spring projected
145 Manually operable
146 Dogged external manipulator
147 By internal manipulator
148 By automatic detent
149 Freely movable external manipulator
150 Dogged bolt or connections
151 Automatic
152 By manipulator
153 Connections only

70. LOCKS—Continued.
Special application
For closures
Door
Swinging door
Locking latch bolts, biased
154 Gravity projected
155 Projecting mechanism lock controlled,
156 Combination and/or key operable,
157 Trip release,
158 Cover, lid, cap, encasing-shield
159 Pivoted
160 Cover carried lock
161 Dead-bolt,
162 Latching bolt,
163 Removable
164 External locking devices,
165 Freely movable when locked,
166 Directly seating
167 Cover carried lock
168 Dead-bolt,
169 Latching bolt,
170 Movably seating
171 Cover carried lock
172 Dead-bolt,
173 Latching bolt,
174 For control and machine elements
175 Valve
176 Locked stationary
177 Externally mounted locking device
178 Valve encasing,
179 Housing carried lock,
180 With padlock,
181 Rod,

70. LOCKS—Continued.
Special application
For control and machine elements
182 Rotary shaft
183 Locked stationary
184 Housing carried lock
185 Dead-bolt,
186 Latching bolt,
187 Shaft carried lock,
188 Freely movable when locked
189 Shaft carried clutch,
190 Gear
191 Planetary,
192 Lever
193 Guide
194 Quadrant
195 Lever carried lock,
196 Fixed lever receiving keeper
197 Lever carried lock,
198 Multiple
199 Externally mounted locking device
200 With padlock,
201 Single
202 Externally mounted locking device
203 With padlock.
204 Disconnectible,
205 Foldable,
206 Universal mounting,
207 Handle, handwheel or knob
208 Retractable or flush handle,
209 Rotary or swinging
210 Locked stationary
211 Externally mounted locking device
212 With padlock,
213 Combination lock
214 Push pin or button,

70. LOCKS—Continued.
Special application
For control and machine elements
Handle, handwheel or knob
Rotary or swinging
Locked stationary
215 Handle carried key lock
216 Coaxially mounted
217 Axially movable dead-bolt,
218 Freely movable when locked
219 Combination lock
220 Push pin or button,
221 Handle carried key lock
222 Coaxial clutch connection
223 Axially movable clutch,
224 Lock and handle assembly,
225 Wheel
226 Rotation blocking
227 Spoke gap traversing type,
228 Brake type,
229 Bolt, nut, stud, stud-cap
230 Locked stationary,
231 Freely movable when locked,
232 Encased,
233 For cycles
234 Anchors,
235 Stands,
236 Drive,
237 For automotive vehicles
238 Plural point
239 With switch,
240 Hood
241 With switch,
242 Fuel valve
243 With switch,
244 Cap combined,

70. LOCKS—Continued.
Special application
For automotive vehicles
245 Transmission
246 Cover combined,
247 Selective type shift rod, fork or block
248 With switch,
249 Planetary type
250 With switch,
251 With switch,
252 Steering mechanism with switch,
253 Pilot wheel control or linkage,
254 Control levers with switch,
255 Other element with switch,
256 Remote control
257 With switch,
258 Accessories
259 Spare or mounted wheel or tire
260 Tire or rim only,
261 For seats.
262 Systems
263 Operation and control
264 Central control,
265 Serially operable.
266 Operating mechanism
267 Predetermined time interval controlled
268 Positively initiated delay interval
269 Interval terminating,
270 Repeating interval,
271 Electric,
272 Clockwork control
273 Continuously operating once initiated
274 Emergency release,
275 Motor
276 Permanent magnet,
277 Electric
278 Combination circuits,

70. LOCKS—Continued.

Operating mechanism

Motor

Electric

279 Alternately mechanically operable,

280 Projected and retracted electrically,

281 Projected electrically only,

282 Retracted electrically only,

283 Dogging manual operator,

284 Combination and key,

285 Combination or key,

286 Combination

287 Individual blocking elements

288 Selectively operable,

289 Complex movement or puzzle type

290 Labyrinthian passage,

291 Tumbler type

292 Plural interdependent sets,

293 Plural independently operable sets,

294 Single tumbler set

295 With ball or roller,

296 Interset sliding tumblers,

297 Individually set sliding tumblers

298 Manually operable,

299 Associated movable operator

300 Removable,

301 Rotary or swinging tumblers

302 Interset tumblers

303 Tumblers released,

304 Individually set

305 Movable selector,

306 Associated movable operator

307 Removable,

308 Pin or rod and slot,

70. LOCKS—Continued.

Operating mechanism

Combination

Tumbler type

Single tumbler set

Rotary or swinging tumblers

Individually set

Associated movable operator

309 Spindle operator

310 Concentric spindles,

311 Axially shiftable spindle,

312 Manually operable,

313 Step-by-step,

314 Combination upsetting,

315 Permutation

316 Compound tumblers

317 With fastener or holder,

318 Pin and socket,

319 Removable change element,

320 Operating elements

321 Fences

322 Bolt or lock housing supported,

323 Tumbler structure and position

324 Nested,

325 Variant diameter,

326 Mounts,

327 Motion restraining means

328 Friction holder,

329 Spindles,

330 Operating indicators

331 Portable combination setting guide,

332 Dials,

333 Tampering prevention or attack defeating

334 Resonance type,

335 Positively dogged,

70. LOCKS—Continued.

Operating mechanism

336 Key

337 Multiple keys

338 Selective shutout type,

339 Interdependent,

340 Master- and change-key

341 Change-key shutout,

342 Sub-master- and change-key

343 Change-key shutout,

344 Single key

345 Tumblerless push or pull key,

346 Tumblerless warded,

347 Tumbler and ward type,

348 Tumbler type

349 Sliding and rotary or swinging tumblers,

350 Sliding tumblers

351 Longitudinal,

352 Transverse,

353 Rotary or swinging tumblers

354 Single set

355 Directly key engaged,

356 Cylinder type with auxiliary tumblers or wards,

357 Cylinder type

358 Plural tumbler sets,

359 Concentric tumblers,

360 Sliding and rotary plug,

361 Sliding plug,

362 Rotary plug

363 Sliding tumblers

364 Transverse of plug

365 Rotary or swinging tumblers

366 Transverse of plug,

367 Cylinder and plug assembly

368 Key and tool controlled,

369 Key only controlled,

70. LOCKS—Continued.

Operating mechanism

Key

Single key

Tumbler type

Cylinder type

370 Cylinder attaching or mounting means,

371 Detachable or removable cylinder,

372 Operating elements, parts, and adjuncts,

373 Cylinder

374 Adjustable,

375 Plug,

376 Tumblers

377 Plate,

378 Pin,

379 Operating connections

380 Rollbacks,

381 Cylinder rings,

382 Permutation

383 Automatically key set combination,

384 Adjustable tumblers

385 Removable change element,

386 With ball or roller,

387 Push or pull key operation,

388 Key ejecting,

389 Key-removal preventing,

390 False or picking key trapping,

391 Operating elements

392 Tumblers,

393 Keys

394 Picking,

395 Multi-part structures

396 With foldable shank or stem,

397 With extensible shank or stem,

70. LOCKS—Continued.
Operating mechanism
Key
Operating elements
Keys
Multi-part structures
398 With slidable bit portion,
399 With pivoted or swinging bit portion,
400 Nested second key,
401 Plural shanks, stems or bit wings,
402 Single shank or stem
403 Round rigid
404 Tubular,
405 Flat rigid
406 Cylinder lock type,
407 Irregular non-planar or undulated,
408 Bow or head,
409 Bitting
410 Frangible,
411 Permutation,
412 Threaded,
413 Magnetic features,
414 Ejecting feature,
415 Identification,
416 Tampering prevention or attack defeating
417 Armoring,
418 Anti-jimmy,
419 Anti-pick
420 Guard ward,
421 Guard tumbler,
422 Yielding or frangible connections,
423 Key-hole guards
424 Portable,
425 Combination controlled
426 Portable,

70. LOCKS—Continued.
Operating mechanism
Key
Tampering prevention or attack defeating
Key-hole guards
427 Key controlled
428 Portable,
429 Key securers, fasteners or retainers
430 Portable.
431 Parts, attachments, accessories, and adjuncts
432 Condition indicators
433 With recorder
434 Electric,
435 Padlock,
436 With register
437 Padlock,
438 Contactual feeler,
439 Tampering detector
440 With seal,
441 Attention directing,
442 For combination operated mechanism
443 Housings,
444 Operating attachments,
445 Knobs, hand grips, etc.,
446 Combination finders,
447 For key operated mechanism
448 Housings
449 Cylindrical,
450 Face plate,
451 Mounting arrangements,
452 Escutcheons,
453 Key guides, internal,
454 Key insertion guides,
455 Key-hole covers,
456 Key holders
457 Flexible,

70. LOCKS—Continued.
Parts, attachments, accessories, and adjuncts
For key operated mechanism
Key holders
458 One piece,
459 Releasable catches,
460 Key identification,
461 Adjustment provisions,
462 Reversible structures,
463 Silencers or mufflers,
464 Anti-friction provisions,
465 Emergency unlocking or release arrangements,
466 Mounting aids, guides and assistors.

71 CHEMISTRY, FERTILIZERS.

1 Processes and products
2 Plant catalyst or stimulant,
3 With insecticide, fungicide or deodorant
4 Inorganic,
5 For mushrooms,
6 Bacterial
7 Nitrogen fixing or nitrifying.
8 Fermentation
9 Aerobic,
10 Anaerobic,
11 Organic material containing (±inorganic)
12 From sewage or night soil
13 With other organic material,
14 From garbage,
15 From animal matter
16 Marine animals,
17 Blood,
18 Horn, hair, feathers, wool, leather, etc.,

71. CHEMISTRY, FERTILIZERS—Con.
Processes and products
Organic material containing (±inorganic)
From animal matter
19 Bone
20 With other organic matter,
21 Guano, stable manure, etc.,
22 With other organic material,
23 From vegetation
24 Peat, humus material, coal, etc.
25 From industrial wastes
26 Sugar or distillery.
27 From synthetic material
28 Urea and its derivatives
29 With P containing substances,
30 With N containing substances,
31 Inorganic material
32 P containing
33 Phosphates
34 AM and NH_4 only
35 N containing,
36 AM and NH_4 containing,
37 Acid treatment
38 Gaseous,
39 Nitric and hydrochloric,
40 H_2SO_4,
41 Acids of phosphorus,
42 Alkaline treatment,
43 Neutralization,
44 Heat treatment
45 AM and Si values,
46 AM values,
47 Carbonates, oxids, sulphates, silicon, and halides,

71. CHEMISTRY. FERTILIZERS—Con.

Processes and products

Inorganic material

P containing

Phosphates

48 Products

49 N containing

50 Nitrates,

51 AM and NH_4 containing,

52 Si containing,

53 Containing carbonates, oxides, sulfates or halides,

54 N containing

55 Cyanamide

56 N containing (except NH_4),

57 AM or NH_4 containing,

58 Nitrates

59 With AM or NH_4 compounds

60 With carbonates, oxides, sulphates or halides,

61 AM or NH_4,

62 Si containing,

63 Carbonates, oxides, sulphates, halides, etc.,

64 Forms, packages or conditioning.

72 MASONRY AND CONCRETE STRUCTURES

0.5 **Miscellaneous.**
1 **Buildings**
6 Elevators and bins,
7 Vaults.
7.1 **Monuments, markers, and guards**
7.2 Monuments,
7.3 Markers.
8 **Bridges.**
9 **Cisterns.**
10 **Cellars**
11 Caves.
12 **Wells.**
13 **Tanks**
14 Lined.
82 **Poles and posts**
83 With bases.
84 Detachable.
85 Reinforced.
90 **Smoke flues**
91 Block,
92 Sectional,
93 Stacks,
94 Lined,
95 Bases.
96 **Stairs.**
15 **Building elements and supports, integral.**
16 **Walls**
17 Faced
18 Tile
19 Wall anchored
20 Metal reinforced,
21 Bonded,
22 Flexible backed.

72. MASONRY AND CONCRETE STRUCTURES—Continued.

Walls
Faced
Tile
23 Rigid backed,
24 Framed,
25 Interlocking,
26 Faced elements,
27 Monolithic
28 Metal reinforced,
Block and plastic
29 Plastic filled
30 Metal reinforced,
31 Plastic covered
32 Metal reinforced,
33 Wood and plastic,
Block
Faced
35 Attached,
36 Integral,
37 Solid
38 Interlocked,
39 Angular,
40 Metal reinforced,
41 Hollow
42 Metal reinforced,
43 Parallel spaced
44 Metal reinforced,
45 Fiber,
Monolithic
46 Partition,
47 Hollow
48 Metal reinforced,
49 Solid
50 Metal reinforced.

72. MASONRY AND CONCRETE STRUCTURES—Continued.

55 **Arches**
56 Bridge
57 Metal lined,
58 Fireplace,
59 Girders
60 Plastic filled,
61 Metal reinforced,
63 Floor
64 Bridge,
65 Tile and concrete
66 Metal reinforced,
67 Tile
68 Metal reinforced,
69 Concrete
70 Externally metal reinforced,
71 Internally metal reinforced.
97 **Doors.**
98 **Sills and jambs.**
99 **Windows.**
100 **Manholes and covers.**
86 **Coping**
87 Borders,
88 Chimney caps,
89 Vaults.
72 **Columns**
73 Tile covered,
74 Plastic covered,
75 Plastic filled,
76 Metal reinforced.
77 **Foundations.**
101 **Bonding and tying**
102 Bonding.
103 Ties,
104 Clamps,

72. MASONRY AND CONCRETE STRUCTURES—Continued.

Bonding and tying
105 Fixing blocks,
106 Joints
107 Block,
108 Anchors and sockets.
109 **Reinforcing elements**
115 Studding,
116 Lathing
121 Corner beads,
119 Wire
120 Furring and fastening,
117 Expanded metal,
118 Furring and fastening,
110 Compound,
111 Bars
112 Attached shear members,
113 Integral shear members,
114 Joints,
122 Spacers,
123 **Plastering**
124 Plaster boards,
125 Ornaments.
Waterproofing
126 Cellars,
127 Walls.
128 **Implements**
129 Bricklaying machines,
130 Plastering machines,
131 Running molds,
134 Hods,
135 Hawks,
136 Trowels and floats,
138 Pointers.

4 **Barometers.**
Instruments
151 Miscellaneous.
152 Navigating
179 Rate of climb (pressure type),
180 Leeway, incidence or side-slip,
181 Ships' logs
182 Pressure differential type
183 With integrating means,
184 Drag type
185 Rotary
186 Vane type,
187 Rotary
188 **Fluid flow direction**
189 With velocity determination.
62 **Measuring vessels**
165 Capacity adjustable,
166 Depth indicating.
30 **Pressure derivatives.**
31 **Pressure gages**
109 Bourdon,
110 Diaphragm,
111 Piston.
50 **Testing illuminating fluids.**
51 **Testing machines**
52 Clock, watch and watch balance,
53 Rotor unbalance,
54 Statistical card verifying,
55 Spur gearing.
21 **Tollers and samplers**
22 Implements.
190 **Calorimeters**
191 Bomb,
192 Steam,

Calorimeters
193 Heat consumption or absorption meters.
194 **Volume or rate of flow meters**
195 Systems
196 Flow comparing,
197 Compound meter,
198 Combined
199 With pressure regulator or demand limit,
200 With gas and liquid separator,
201 With connections or boxes,
202 Proportional
203 With valved proportioning means,
204 Thermal type,
205 Pressure differential type
206 With integrating means,
207 With automatically variable restriction
208 Slotted piston or cylinder,
209 Cone and ball or disk,
210 Orifice and tapered plug,
211 Orifice or flow nozzle,
212 Pitot,
213 Venturi,
214 Centrifugal,
215 Weir type
216 Submerged orifice or discharge nozzle,
Tank type
217 Rotary tank or bucket
218 With power drive,

Volume or rate of flow meter
Tank type
219 Plural measuring chamber
220 With fluid-pressure-operated valve,
221 With float-operated valve,
222 With siphon discharge,
223 Single measuring chamber
224 With float-operated valve
225 With trip gear,
226 With siphon discharge,
227 Area-velocity integrating,
228 Vane type,
229 Turbine type
230 With regulating adjustment,
231 With end supply and delivery,
232 Expansible chamber
233 With variable indicator drive,
234 Wet type (liquid seal)
235 Rotary drum,
236 Oscillating bell or drum,
237 Reciprocating bell,
238 Nutating bell,
239 Reciprocating piston or cylinder
240 Transversely reciprocating piston and cylinder,
241 Oscillating cylinder,
242 Valveless,
243 Duplex,
Parallel cylinders
244 Wobble plate or cam,
245 With transverse shaft
246 With single distributing valve.

1 **Instrument proving or calibrating**
2 Speedometer
3 Volume or rate of flow meters or elements
4 Fluid pressure responsive devices and gauges
5 Timing apparatus (e. g., fuses, camera shutters, etc.)
6 Chronometers (e. g., clock, watch, and watch unbalance)
7 **By abrasion, milling, rubbing, or scuffing**
8 Wheel tread, tires, track, or roadway
9 **Frictional resistance, coefficient, or characteristics**
10 Lubricant testing
11 **Testing of impact delivering or shock absorbing apparatus**
12 **Testing by impact or shock**
13 Ball driving
14 Typewriter ribbon; carbon paper
15 **Thermal tests**
16 Dilatometry
17 Transformation point
18 **Mass spectrometry**
19 **Gas content of materials**
20
to **(No subclasses)**
22
23 **Gas analysis**
24 Sonic
25 Thermal
26 Electric
27 Resistance change
28 For solid matter
29 For moisture content or vapor pressure
30 For density
31 **(No subclass)**
32 **Specific gravity or density of liquids or solids**
33 Hydrometers
34 With thermometer
35 **Explosives; detonation or knock**
36 **Illuminating fluids**
37 **With fluid pressure**
38 Porosity or permeability
39 Fluid pressure brake systems or units
40 Leakage
41 Conveyor feed
42 Turret
43 With automatic discard
44 With semi-automatic discard
45 With automatic discard
46 Between fitted parts; joints
47 Piston, ring, or engine valve
48 Tire valves
49 Inner tubes or casings
50 Mesh envelopes
51 Automobile radiators
52 **Testing sealed receptacles**
53 **Testing of liquids or liquid suspensions of solids**
54 Viscosity
55 Friction tube
56 Orifice or nozzle flow or extrusion
57 Gravity movement of object in medium
58 Adhesion-cohesion between wetted surfaces
59 Force reaction to member driven therein
60 Shearing torque between parallel surfaces
61 Sediment or foreign content
62 (No subclass)
63 Paper pulp freeness
64 Lubricant testing
65 **Center of gravity; turning moments; metacentric height**
66 **Rotor unbalance**
67 **Vibration**
68 Torsional
69 Sonic
70 Sensing apparatus
71 With inertia element
72 Vehicle shakers
73 **Moisture content or absorption characteristics of material**
74 By residual capacity measurement
75 By heat conductivity
76 By desiccation or extraction
77 By wet and dry bulb temperatures
78 **Hardness**
79 Scleroscopes or rebound
80 Tonometers
81 By penetrator or indentor
82 Impact type
83 With successive minor and major loads
84 Soil bearing capacity
85 Penetrator elements
86 **Embrittlement; corrosion**
87 **Ductility; brittleness**
88 **Stress; strain of materials or structures**
89 Stress-strain
90 Load application pacers or control
91 Repeated stress with record or power stop
92 Alternate repeated tension-compression stress
93 Combined tension-compression or universal apparatus
94 Compression testing
95 Tensile
96 Tear testing
97 Fluid transmission
Stress: strain of materials or structures
Tensile
98 With pendulum dynamometer
99 Torsional testing
100 Flexing, bending or folding
101 Izod; charpy; shear tests
102 Bursting or rupture strength of sheet materials
103 Specimen clamps, holders, and supports
104 **Surface and cutting edge testing**
105 Roughness
106
to **(No subclasses)**
111
112 **Power plant or unit efficiency**
113 Automobile fuel consumption
114 Miles per gallon
115 Pressure derivatives
116 **Motor and engine testing**
117 With vehicle wheel supporting rollers or belt
118 Testing auxiliary units
119 Motor parts
120 Piston rings
121 **Brake testing**
122 Slidable platform
123 Roller or belt wheel support
124 Relatively shiftable front and rear wheel supports
125 Inertia type
126 With driving effort indication
127 Single wheel portable unit
128 Road test attachments or adjuncts
129 Vehicle installations
130 Single wheel rotating and resistance measuring means
131 Torque measuring lever

Brake testing
132 Brake depressors with measuring means
133 **Dynamometers**
134 Torque by absorption
135 Friction drag type
136 Torque during transmission
137 Recording
138 Total registering
139 Torque measuring wrenches
140 Shaft or bearing thrust measuring
141 Push or pull measuring
142 Pendulum type
143 Line tensiometers
144 Deflection
145 Racket stringing
146 **Tire, tread or roadway**
147 **Wind tunnels; aerodynamic wing and propeller study**
148 **Model basins and testing tanks**
149 **Volumetric content measuring**
150 **Coating materials; inks; adhesives; plastics**
151 **Bore hole and drilling study**
152 Formation logging
153 By drill mud or core analysis
154 Thermal
155 Fluid intrusion, theft, or flow study
156 **Statistical record verifying**
157 **Record strip sprocket hole testing**
158 **Hoisting cables and ropes**
159 **Sheet; woven fabric; fibre**
160 Filament
161 **Spring testing**
162 **Toothed gear**
163 **Coin**
164 **Miner's lamps**
165 **(No subclass)**
166 **(No subclass)**
167 **Ordnance and projectiles**
168 **Hydraulic; blower; pumps and equipment**
169 **Flour; dough; bread**
170 **Meteorology**
171 Rain gauges
172 **Orthopedic pressure distribution**
173 to 177 (No subclasses)
178 **Navigation**
179 Rate of climb (pressure type)
180 Leeway incidence or side-slip
181 Ships logs
182 Pressure differential type
183 With integrating means
184 Drag type
185 Rotary
186 Vane type
187 Rotary
188 **Fluid flow direction**
189 With velocity determination
190 **Calorimeters**
191 Bomb
192 Steam
193 Heat consumption or absorption meters
194 **Volume or rate of flow meters**
195 Systems
196 Flow comparing
197 Compound meter
198 Combined
199 With pressure regulator or demand limit
200 With gas and liquid separator
201 With connections or boxes
202 Proportional
203 With valved proportioning means
204 Thermal type

Volume or rate of flow meters
205 Pressure differential type
206 With integrating means
207 With automatically variable restriction
208 Slotted piston or cylinder
209 Cone and ball or disk
210 Orifice and tapered plug
211 Orifice or flow nozzle
212 Pitot
213 Venturi
214 Centrifugal
215 Weir type
216 Submerged orifice or discharge nozzle
Tank type
217 Rotary tank or bucket
218 With power drive
219 Plural measuring chamber
220 With fluid-pressure-operated valve
221 With float-operated valve
222 With siphon discharge
223 Single measuring chamber
224 With float-operated valve
225 With trip gear
226 With siphon discharge
227 Area-velocity integrating
228 Vane type
229 Turbine type
230 With regulating adjustment
231 With end supply and delivery
232 Expansible chamber
233 With variable indicator drive
234 Wet type (liquid seal)
235 Rotary drum
236 Oscillating bell or drum
237 Reciprocating bell
238 Nutating bell

Volume or rate of flow meters
Expansible chamber
239 Reciprocating piston or cylinder
240 Transversely reciprocating piston and cylinder
241 Oscillating cylinder
242 Valveless
243 Duplex
Parallel cylinders
244 Wobble plate or cam
245 With transverse shaft
246 With single distributing valve
247 Radial cylinders
248 Valved piston
249 With fluid-actuated valve
250 With piston or rod-actuated valve gear
251 With trip gear
252 Oscillating piston
253 Rotary piston or cylinder
254 With compensating bypass
255 With orbital movement
256 Plural stationary abutment
257 Single stationary abutment
258 Nutating piston
259 With sliding vane
260 With swinging vane
261 With interengaging pistons
262 Diaphragm or collapsible wall
263 Multiple diaphragm
264 Duplex
265 With rotary valve
266 Crank-operated
267 With flag rods
268 With oscillating or reciprocating valves

Volume or rate of flow meters
Expansible chamber
Diaphragm or collapsible wall
269 Single diaphragm
270 With diaphragm-actuated valve trip gear
271 With fluid-actuated valve
272 Elements
273 Casings
274 Diaphragm meter type
275 Anti-reversing mechanisms
276 Check valve
277 "Frostproof" constructions
278 Diaphragm mountings
279 Diaphragms
280 With oiling structure
281 Tangent adjustments
290 **Liquid level or depth gauges**
291 With other measuring devices
292 Thermometer
293 With illumination
294 With funnel or hose nozzle
295 Thermal type
296 Weighing type
297 Test cock type
298 Exploring tube
299 Hydrostatic pressure type
300 Bathometer type
301 With electrically controlled indicator
302 With fluid displacement or replenishment
303 Suction type or vacuum tank action
304 Immersible electrode type
305 Float
306 Combined
307 With signal
308 Electric
309 Buoyancy type

Liquid level or depth gauges
Float
310 Total registering
311 Multiple float
312 Recording
313 With electrically controlled indicator
314 With position sensing
315 With float lock
316 With fluid transmission
317 Pivoted float arm
318 With flexible cable transmission
319 Vertically reciprocable
320 With spiral cam or guide
321 With flexible cable transmission
322 Indicator stem attached
323 Sight glasses
324 With cleaner
325 With guards or casings
326 Boiler type
327 Reflectors or magnifiers
328 Boiler type
329 Duplex or multiple section
330 Transparent closure plate type
331 Bull's eye type
332 With valves
333 Safety feature
334 Transparent closure plate type
335 **Hygrometers**
336 Combined
337 With expansible absorption element
338 Wet and dry bulb type
339 **Thermometers**
340 At plural zones
341 Current generating
342 Current modifying
343 Combined
344 With other measuring devices
345 Pressure gauge

Thermometers
Combined
346 With internal combustion engine
347 Cooling system
348 Radiator cap mounted
349 With fluid circulation
350 With transformer
351 With rolls or rotary devices
352 With piercing means
353 With float
354 With sampling cup
355 Radiation type
356 Color change
357 Fluid flow change
358 Fusible
359 Current generating type
360 With potentiometer
361 With cold junction cooling or compensation
362 Current modifying type
363 Expanding solid
364 Linearly expanding bar
365 Laterally deflecting bar
366 Curved bar
367 Coil
368 Expanding fluid
369 Pressure type
370 With ambient temperature correction
371 Indicating tube type
372 With magnifying lens
373 With liquid returning means
374 With support or housing
375 Wall aperture
376 Plate type
377 Base supported
378 Bracket supported

379 **Muscular strength**
380 Spring scale instruments
381 Pivotal indicator
382 **Gravitational determination**
383 Torsion balances
384 **Barometers (e. g., altimeters)**
385 Mercury
386 Aneroid
387 Settable
388 **Fluid pressure gauges**
389 Combined
390 Vehicle tire or valve installations
391 With recorder
392 With fluid pulsation dampener
393 With barometric and/or temperature compensation
394 With steam trap
395 With protective separator
396 With excess or maximum registering
397 With variable drive
398 Current generating or modifying type
399 Pirani type
400 McLeod type
401 U-tube, liquid column
402 Sphygmomanometer type
403 Float
404 Bell type
405 Balance
406 Diaphragm (e. g., with fluid transmission to indicator)
407 Multiple and/or differential
408 Plate
409 Sack
410 Capsule or bellows

Fluid pressure gauges
411 Bourdon
412 Multiple and/or differential
413 Intermediately supported Bourdon
414 With mechanism dampening means
415 With dial or frame zeroizing adjustment
416 Safety pressure release casings
417 With manual resetting means
418 Bourdon tubes and mountings
419 Piston
420 Mountings and connections
421 **Samplers and tollers**
422 From closed conduit
423 Reciprocatory separator
424 Rotary separator
425 Implements
426 **Measuring vessels**
427 With depth indication
428 Removable indicator
429 Capacity adjustable
430 **Instrument mechanism dampening**
431 **Instrument casings**
432 **Miscellaneous**

1 **Miscellaneous.**
2 **Automatic operation or control (trips)**
3 Speed controlled,
4 Hit and miss.
5 **Gyroscopes.**
6 **Engine starters**
7 Automatic,
8 Radial meshing,
9 Cam operated.
10 **Dial operators.**
11 **Power take-off**
12 Speedometer,
13 Wheel take-off
14 Wheel bed type,
15 Supported pulley.
16 **Power tables and stands.**
17 **Washer and wringer.**
Mechanical movements
20 Oscillating to reciprocating and alternating rotary,
21 Oscillating to reciprocating and intermittent rotary,
22 Rotary to reciprocating and rotary,
23 Rotary to reciprocating and alternating rotary,
24 Rotary to reciprocating and intermittent rotary,
25 Rotary to or from reciprocating or oscillating
26 Head motions,
27 Reciprocating carriage motions
28 Phonograph type,
29 Rack and pinion type
30 Shifting rack,
31 Shiftable pinion,
32 Segmental pinion,
33 Alternately rotated pinion,
34 Clutchable gears
35 Bevel,
36 Overcoming dead center,

Mechanical movements
Rotary to or from reciprocating or oscillating
37 Belt or chain carried member,
38 Crank, lever, toggle, and slide,
39 Crank, lazy-tong, and slide,
40 Crank, pitman, lever, and slide
41 Pump jack type,
42 Crank, pitman, and lever
43 Multiple levers,
44 Crank, pitman, and slide,
45 Crank, lever, and slide
46 Rack connections,
47 Crank and lever
48 Slidable connections,
49 Crank and slide
50 Slidable connections,
51 Crank and multiple pitmans,
52 Planetary gearing and slide,
53 Cam, lever, and slide,
54 Cam and lever,
55 Cam and slide
56 Axial cam
57 Grooved
58 Multiple screw,
59 Alternately rotated screw,
60 Wabbler type,
61 Unbalanced weights,
62 Tramel-pitman,
63 Rotary to rotary
64 Inertia or centrifugal transmitters,
65 Crank, pitman, lever, and crank,
66 Crank, lever, and crank,
67 Crank, pitman, and crank,
68 Cranks, link connected,
69 Cranks, slidable connections,
70 Rotary to alternating rotary
71 Mangle connections
72 Shiftable driven gear

Mechanical movements
Rotary to alternating rotary
Mangle connections
Shiftable driven gear
73 Central teeth,
74 Mutilated gearing connections,
75 Crank, pitman, and lever,
76 Reciprocating rack connections
77 Crank and pitman actuator,
78 Simple crank actuator,
79 Oscillating rack connections
80 Mangle actuated,
81 Crank and pitman actuator,
82 Flexible connector type,
83 Associated inertia devices,
84 Rotary to intermittent unidirectional motion,
86 Rotary to gyratory
87 Unbalanced weights,
88 Reciprocating or oscillating to intermittent unidirectional motion,
89 Reciprocating or oscillating to or from alternating rotary
90 Rack and pinion
91 Rectilinear rack,
92 Associated inertia devices
93 Rack and pinion
94 Rectilinear rack,
95 Flexible connector type,
96 Oscillating to oscillating
97 Snap actions,
98 Geared connections,
99 Reciprocating to or from oscillating
100 Snap actions,
101 Compound lever and slide,
102 Lever and slide
103 Straight line motions,
104 Slidable connections,

Mechanical movements
Reciprocating to or from oscillating
Lever and slide
105 Link connections,
106 Toggle transmissions,
107 Cam connections,
108 Flexible connections,
109 Rack and pinion,
110 Reciprocating to reciprocating.
111 **Mechanical movements (intermittent grip type)**
112 Rotary to intermittent unidirectional motion
113 Automatically controlled
114 Speed,
115 Planetary,
116 Rotary crank or eccentric drive
117 Adjustable,
118 Lever transmitter
119 Adjustable leverage,
120 Rack and pinion transmitter
121 Adjustable throw,
122 Rotary cam drive
123 Adjustable throw
124 Radial cam,
125 Radial cam,
125.5 Intermittently engaged clutch,
126 Oscillation or reciprocation to intermittent unidirectional motion
127 Screw and nut devices,
128 Slide actuator
129 Multiple acting,
130 Rack actuator
131 Multiple acting
132 Inwardly facing racks,
133 Oscillating
134 Multiple acting
135 Inwardly facing racks,
Strap actuator
136 Multiple acting

Mechanical movements (intermittent grip type)
Oscillation or reciprocation to intermittent unidirectional motion
Strap actuator
Multiple acting
137 Spring or weight return
138 Single acting
139 Engine starter type
140 Spring or weight return,
141 Spring or weight return,
142 Lever actuator
143 Multiple acting,
144 Grip units and features
145 Compound movement handle
146 Reversible,
147 Transverse pivots,
148 Gripper releasing devices
149 Power pawl lifter
150 Automatic
151 Idle stroke
152 Cooperating holding pawl
153 Power stroke,
154 Cooperating holding pawl,
155 Holding pawl lifter,
156 Gripper mountings, lever
157 Reversible,
158 Multiple acting
159 Single ratchet or clutch,
160 Gripper mountings, slide
161 Multiple acting,
162 Grip features
163 Driving band
164 Clamping,
165 Driven band and gripper
166 Positive grip,
167 Driving ratchet-bar or rack
168 Multiple acting,
169 Driven ratchet-bar and power dog.
189 Gearing
189.5 Combined fluid coupling and gearing,

Gearing
Frictional
190 Variable speed ratios
190.5 Automatic.
191 Cone
192 Interposed band.
193 Interposed roll,
194 Disk and wheel
195 Multiple driven parts,
196 Pressure balancing and distributing,
197 Complete traverse,
198 Spherical,
199 Disks
200 Interposed idler,
201 Interposed idler and shaft,
202 Single forward or reverse ratios
203 Gears and belt,
204 Concentric gears,
205 Gears and direct clutch,
206 Single speed ratio,
Frictional adjustment
207 Shiftable motor and gear
208 Automatic
209 Spring or weight,
210 Magnetic,
211 Eccentric,
212 Screw,
213 Lever,
214 Frictional working surfaces
215 Coverings,
216 Form,
216.5 Belt and sprocket
217 Variable speed
218 Forward and reverse,
219 Single speed
220 Forward and reverse,
221 Tangential,
222 Limited or reciprocating travel
223 Multiple-driven elements,
224 Multiple bight,
225 Single line, parallel runs,

Gearing
Belt and sprocket
Single speed
226 Auxiliary idler
227 Spring or weight actuated,
228 Jointed or pivoted frame,
229 Special working faces,
230 Cleaning or lubricating,
230.1 Pulleys
230.2 Solid,
230.3 Assembly
230.4 Spoke and hub,
230.5 Rim structure
230.6 Air-escape rims,
230.7 Nonmetallic rim or rim coverings.
230.8 Sheet metal,
230.9 Bull wheel,
230.10 Laminated,
230.11 Split
230.12 Divided spokes,
230.13 Assembly,
230.14 Sheet metal,
230.15 Laminated,
230.16 Expansible
230.17 Cones,
230.18 Expansible rim
230.19 Gear controlled,
230.20 Axially movable collar and links,
230.21 Axially movable collar and cam,
230.22 Rotatable collar and links,
230.23 Rotatable collar and cam,
230.24 Grip,
231 Belts
232 Laminated
233 V-cross section,
234 V-cross section,
235 Link
236 V-cross section,

Gearing
Belt and sprocket
Belts
237 Metal reinforced,
238 Round,
239 Woven wire,
240 Guides
241 Realigning,
242 Belt shifters
242.1 Double belt
242.2 Automatic,
242.3 Cone or step pulleys
242.4 Successive shift,
242.5 Idle belt supports,
242.6 Belt throwers,
242.7 Belt lifters,
242.8 Belt tighteners
242.9 Load controlled,
242.10 Intermediate idler
242.11 Automatic,
242.12 Laterally movable shaft
242.13 Movable machine frame,
242.14 Rectilinear,
242.15 Pivotal,
242.16 Eccentric,
243 Sprockets
244 Expansible,
245 Sprocket chains
246 Universal connector,
247 Tread,
248 Solid link and coupler
249 Detachable,
250 Link forms,
251 Pivot pin
252 Integral pivot,
253 Rolling contact,
254 Detachable,
255 Wear-resisting part,
256 Antifriction devices,
257 Lubricated,
258 Connectors and splicers,

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Gearing
Planetary
259 Automatic control
260 Speed responsive,
261 Complex units
262 Selector type,
263 Friction type,
264 Bevel and spur,
265 Bevel type,
266 Spur type
267 Sun, orbit, and carrier control
268 Unitary drive,
269 Sun and orbit control
270 Unitary drive,
271 Sun and carrier control
272 Unitary drive,
273 Orbit and carrier control
274 Unitary drive,
275 Sun control
276 Unitary drive,
277 Orbit control
278 Unitary drive,
Carrier control
279 Unitary drive,
280 Simple units
281 Friction type, variable speed,
282 Compound drive
283 Changeable speed train,
284 Frictional
285 Disk and wheel,
286 Belt type,
287 Locked units,
287.5 Spur or bevel, axle to road wheel type,
288 Bevel type,
289 Spur type
290 Sun control,
291 Orbit control,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Gearing
Planetary
Simple units
292 Controls
293 Fluid
294 Planet pinion,
295 Planet pinion,
296 Single speed and reverse
297 Bevel type,
298 Spur type,
299 Single speed
300 Compound movement,
301 Compound drive, planetary gearing,
302 Frictional,
303 Bevel type,
304 Wabbler type,
305 Spur type
306 Sun and carrier,
307 Orbit and carrier,
308 Eccentric type
309 Orbit-driven,
310 Differentials
311 Bevel type,
312 Spur type,
313 Helical gear,
314 With reduction gearing,
315 With partial lock,
316 With positive lock,
318 Alternating rotary or continuous,
319 Alternating rotary
320 Progressive,
321 Shiftable and/or slidable gears,
322 Clutchable gears
323 On single driven member,
324 On single driving member,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Gearing
325 Interchangebly locked
326 Change speed and differential
327 Parallel shafting,
328 Change speed and planetary,
329 Disconnectable counter shaft,
330 Multiple concentric clutch shafts,
331 Plurality of counter shafts,
332 Internal-external gears,
333 Combined gear and clutc
334 Preselector,
335 Control mechanism
Automatic
336 Speed responsive
336.5 Governor,
337 Torque responsive,
337.5 Cam operated,
338 Double or auxiliary transmission,
339 Meshing assisters
340 Double clutch and interposed transmission,
Longitudinally slidable
Multiple spur gears
341 With tumbler gear,
342 Selective
343 Direct clutch and drive,
344 Progressive
345 Direct clutch and drive,
346 Fluid operated,
347 Multiple bevel gears,
Single spur gear
348 Tumbler and cone
349 Multiple cone,
350 Single bevel gear,
351 Pin or crown gears,
352 Laterally slidable gears
353 Rotary carriage,
354 Swinging carriage,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Gearing
Interchangeably locked
355 Single forward and reverse speeds,
Slidable keys or clutches
356 Alternative clutch shaft,
Multiple clutch shafts
357 Progressive
358 Keys simultaneously slidable,
359 Selective,
360 Multiple forward and reverse,
361 Single forward and reverse,
Single clutch shaft
Progressive
362 Multiple key
363 Spur gears
364 Fluid operated,
365 Electrically operated,
366 Single key
367 Reversible driver, one-way driven.
368 Clutch and ratchet,
369 Spur gears
370 Intermediate clutch,
371 Sliding clutch carrier,
372 Sliding clutch operator,
373 Selective
374 Multiple key
375 Spur gears,
376 Single speed forward and reverse
377 Spur gears,
378 Bevel gears,
379 Bevel and idler gears,
380 Pivotally supported
381 Windmill turntable,
383 Screw,
384 Spur,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Gearing

Pivotally supported
385 Bevel
386 Wheel type,
387 Wringer type,
388 Follow-up mechanism,
389 Multiple driving or driven elements
389.5 Differential types,
390 Eccentric driving shaft and axle,
391 Central driving shaft in axle,
392 Parallel shafts, adjustable gear mesh,
393 Varying speed ratio
394 Planetary,
395 Adjustable
396 Relative movable axes
397 Parallel shafts,
398 Automatic control
399 Parallel shafts,
400 Fixed axes
401 Parallel shafts,
402 Automatic control
403 Parallel shafts,
404 Reversing means
404.5 Governor control,
405 Disconnecting means,
406 Displaceable elements,
Operators
407 Hand or power,
408 Alternative cranks,
409 Back-lash take-up,
410 Pressure distributing,
411 Yieldability in gear trains,
412 Directly cooperating gears
413 Parallel axes or shafts
414 External type
415 Pin teeth,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Gearing

Directly cooperating gears
416 Intersecting axes
417 Bevel gear type,
420 Spur and bevel,
421 Spur
422 Rack and pinion,
423 Bevel
424 Motor vehicle drive,
424.5 Spiral
424.6 Driven rack or shaft,
424.7 Screw,
424.8 Screw and nut,
425 Worm
425.5 Variable speed,
426 Intermittent motion,
427 Distribution of pressure,
428 Plural driving or driven,
431 Gear and rotary bodies
432 Laterally spaced wheels,
433 Radially spaced wheels,
434 Rotary bodies
435 Mutilated,
436 Geneva,
437 Irregular teeth and bodies,
438 External and internal teeth,
439 Sectional
440 Back-lash take-up
441 Screw and nut,
443 Sound deadening,
444 Differential disks,
445 Multiple disks,
446 Separate rim
447 Detachable,
448 Segmental rim,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Gearing

Rotary bodies
Sectional
449 Sheet metal,
450 Diametrically split,
451 Shaft-admitting insert,
457 Teeth
458 Worm and helical
459 Nuts,
459.5 Bevel,
460 Spur
461 Yieldable,
462 Form
464 Antifriction
465 Roller,
466 Twisted,
467 Lubrication
468 Teeth,
469 **Control lever and linkage systems**
470 Resilient connections,
471 Multiple controlled elements
472 Motor and transmission,
473 Transmission control
474 Foot operated,
475 With detent mechanism,
476 With reverse lockout,
477 With interlocked elements,
478 Foot operated,
479 Multiple controlling elements
480 Interconnected
481 Hand and foot
482 Accelerator,
483 Interlocked,
484 Steering and control assemblies
485 Rotary control shaft,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Control lever and linkage systems

Multiple controlling elements
Steering and control assemblies
486 Reciprocating control elements
487 Flexible,
488 Handle bar type
489 Flexible control element,
490 Antirattling elements,
491 Hand operated
492 Steering posts
493 Adjustable,
494 Auxiliary operators,
495 Position controllers,
496 Motion translating mechanism
497 Cam type,
498 Gear type
499 Screw and nut,
500 Worm,
501 Flexible transmitter
502 Slidable operator,
503 Sliding rod,
504 Rotatable rod, shaft, or post
505 Gear, drum, and cable,
506 Drum and cable,
507 Gear
508 Variable ratio,
509 Screw and nut,
510 Adjustable,
511 Mountings,
512 Foot operated
513 Accelerator,
514 Signal,
515 Knee operated,
516 Variable output force
517 Flexible,
518 Variable input leverage,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Control lever and linkage systems

Elements

519 Levers
520 Toggle
521 Lazy tongs,
522 Adjustable,
522.5 Swing posts,
523 Hand
524 Jointed,
525 Adjustable,
526 Stops,
527 Detents
528 Hand crank,
529 Interrelated lever release,
530 Gear,
531 Friction,
532 Lever engaging,
533 Lever engaging rack
534 Pivoted,
535 Lever carried pawl
536 Handle release,
537 Finger lever release
538 Slidable,
539 Pedal controlled,
540 Lever carried rack
541 Pivoted,
542 Pedal controlled,
543 Handles
544 Extension,
545 Hand crank
546 Extensible,
547 Collapsible,
548 Shaft connections
549 Yieldable,
550 Engine starter type
551 Holders,

74. MACHINE ELEMENTS AND MECHANISMS—Continued.

Control lever and linkage systems

Elements

Handles

551.1 Handle bars
551.2 Spring biased or supported,
551.3 Folding or adjustable
551.4 Sectional
551.5 Simultaneously movable,
551.6 Continuous
551.7 With handle latch,
551.8 Attachments and accessories,
551.9 Handholds and grips,
552 Hand wheels
553 Knob or dial,
554 Slidable,
555 Pivoted,
556 Releasable,
557 Handles,
558 Rim grips and covers,
559 Rocker arms,
560 Pedals
561 Treadles,
562 Extension,
563 Pads and covers,
564 Foot rests,
565 Controller checks,
566 Slot closers and lever guards.

Elements

567 Cams
568 Adjustable,
569 Follower,
570 Eccentrics and straps
571 Adjustable,
572 Flywheels and rotors
573 With balancing means,
574 With vibration damping means.

74. MACHINE ELEMENTS AND MECHANISMS—Continued

Elements

575 Pawls and ratchets
576 Noiseless,
577 Pivoted pawls,
578 Sliding pawls,
579 Pitmans and connecting rods
580 Radial,
581 Yieldable
582 Longitudinal springs,
583 Fluid cushion,
584 Automatic release
585 Toggle link type,
586 Longitudinally adjustable,
587 Hollow rod, lubricated,
588 Sheet metal type,
589 Counterbalanced
590 Weight type
591 Rotating,
592 Spring,
593 Section coupled,
594 Bearings, adjustable,
594.1 Cranks and pedals
594.2 With attached gear,
594.3 Variable,
594.4 Pedals
594.5 Counterbalanced,
594.6 With toe or shoe clips,
594.7 Adjustable or folding,
595 Cranks and wrist pins
596 Multiple throw
597 Sectional,
598 Sectional,
599 Yieldable,
600 Adjustable
601 Automatically,
602 Variable,

74. MACHINE ELEMENTS AND MECHANISMS—Continued

Elements

Cranks and wrist pins

603 Counterbalanced
604 Vibration dampers,
605 Lubricated,
606 Casings
607 Axle and torque tubes,
608 Guards
609 For rotary member
611 Belt or chain,
612 Guard mechanisms
613 Automatic
614 Oscillating member actuator,
615 Reciprocating member actuator,
616 Operator controlled,
617 Set screw,

75 METALLURGY.

0.5 Miscellaneous.
1 Beneficiating ores
2 Chemical treatment and flotation.
3 Agglomerating
4 By coking,
5 By sintering,
6 Desulphurizing, dephosphorizing and dearsenizing
7 Roasting
8 Blast,
9 Ores in suspension.
10 Electro-thermic processes
11 Reduction, iron and iron alloys,
12 Treating molten iron and iron alloys
13 Transfer processes,
14 Zinc.

75. METALLURGY—Continued.

20 Pyrometallurgy
21 Reduction of complex ores,
22 Powder metallurgy,
23 Pyritic smelting,
24 Treating slags and oxidized drosses,
25 Treating flue dust,
26 Treating ores in suspension,
27 Thermit type reduction and treatment,
28 Iron and steel
29 Reduction
30 Slag and special slag formation,
31 Fractional,
32 To wrought iron,
33 To solid iron without fusion
34 Gaseous reducing agent
35 Cyclic processes,
36 Direct heating,
37 Indirect heating,
38 Followed by fusion,
39 Melting and purifying solid iron,
40 With fusion
41 Blast furnace reduction,
42 Blast furnace fuel,
43 Melting iron
44 With briquetting,
45 Treating molten iron or iron alloys
46 Transfer processes,
47 Making wrought iron,
48 Carburizing,
49 Vacuum treatment,

75. METALLURGY—Continued.

Pyrometallurgy
Iron and steel
Treating molten iron or iron alloys.
50 Heat and mechanical treatment,
51 Combined solid and gaseous treating agents
52 Solid basic and gaseous oxidizing agents,
53 Solid treating agents
54 Basic and oxidizing,
55 Basic,
56 Oxidizing,
57 Reducing,
58 Scavangers,
59 Gaseous treating agents
60 Oxidizing,
61 Mechanical procedure,
62 Non-ferrous
63 Separating metallic constituents
64 Utilizing tin scrap,
65 Melting,
66 Alkali metals,
67 Alkaline earth metals and magnesium,
68 Aluminum,
69 Antimony,
70 Bismuth,
71 Cadmium,
72 Copper
73 Smelting and bessemerizing,
74 Smelting,
75 Bessemerizing matte,

75. METALLURGY—Continued.

Pyrometallurgy
Non-ferrous
Copper
76 Treating molten copper,
77 Lead
78 Refining
79 Desilverizing,
80 Manganese,
81 Mercury,
82 Nickel and cobalt,
83 Noble metals,
84 Rare and refractory metals,
85 Tin,
86 Zinc
87 Direct heating,
88 Condensing and purifying,
89 Reducing and separating,
90 Reduction without fusing,
91 Reducing ores with gases,
92 Smelting processes,
93 Treating molten metals,
94 Fluxes,
95 Reactive furnace linings,
96 Protecting molten metal from oxidation.
97 Hydrometallurgy
98 Utilizing tin scrap,
99 Treating electrolytic and cementation slimes,
100 Treating gold and silver bullion,
101 Chemical leaching
102 With bromine,
103 With ammonia or amonium compounds,

75. METALLURGY—Continued.

Hydrometallurgy
Chemical leaching
104 With ferric salts,
105 With cyanide
106 Precipitating
107 Metallic precipitant,
108 Precipitating
109 Metallic precipitant,
110 Combined sulphating and chloridizing,
111 Chloridizing
112 Chlorine gas,
113 Dry,
114 Wet,
115 Sulphating
116 Dry,
117 Copper,
118 Gold and silver,
119 Nickel and cobalt,
120 Zinc and lead,
121 Miscellaneous metals.
122 Alloys
123 Ferrous
124 Iron aluminum,
125 Iron copper,
126 Iron chromium
127 Processes,
128 Iron nickel chromium,
129 Processes
130 Cast iron,
131 Reduction,
132 Ferro-phosphorus,
133 Alloy reduction,

75. METALLURGY—Continued.

Alloys

134 Non-ferrous
135 Processes,
136 Hard alloys
137 Processes,
138 Aluminum
139 Copper
140 Tin,
141 Zinc,
142 Magnesium,
143 Silicon,
144 Nickel,
145 Silver,
146 Zinc,
147 Magnesium,
148 Silicon,
149 Antimony,
150 Beryllium,
151 Cadmium,
152 Cerium and rare earths,
153 Copper
154 Tin,
155 Zinc,
156 Tin lead,
157 Tin zinc
158 Zinc lead
159 Nickel,
160 Silicon,
161 Manganese,
162 Aluminum,
163 Lead,
164 Titanium,
165 Gold,

75. METALLURGY—Continued.

Alloys

Non-ferrous

166 Lead
167 Alkali and alkaline earth metals or magnesium,
168 Magnesium,
169 Mercury,
170 Nickel and/or cobalt
171 Chromium,
172 Platinum group,
173 Silver,
174 Tantalum,
175 Tin,
176 Tungsten and/or molybdenum and/or chromium,
177 Zirconium,
178 Zinc.

76 METAL TOOLS AND IMPLEMENTS—MAKING.

1 Miscellaneous.
12 File cutting
13 Rasp punching,
14 Swaging,
15 Trip-operated cutter
16 Blow controlled,
17 Idle cutter, hammer operated
18 Blow controlled,
19 Pressers,
20 Beds and clamps,
21 Cutter heads,
22 Feeding
23 Screw operated,
24 Processes.
25 Saw making
Stretching
26 Hammer,
27 Roller,
Tooth forming
28 Chisel cutting,
29 Die cutting,
Sharpening and gumming
30 Die cutting,
31 Reciprocating tool
32 Gin saws
33 Traveling tool carriage,
34 Clamp feed,
35 Tooth-engaging feed,
36 File holders and guides,
37 Rotating tool
38 Spiral,
39 Switch-cam feed,
40 Pivoted gate.

76. METAL TOOLS AND IMPLEMENTS—MAKING—Contd.

Saw making—
Sharpening and gumming—
Rotating tool—
41 Sliding gate,
42 Pivoted saw carriage,
43 Sliding saw carriage,
44 Milling,
45 Disks and cutters,
46 Dressing, jointing, and gaging,
47 Dressing and jointing
48 Circular saw,
49 Compressing,
50 Rotary tool,
51 Swaging
Pivoted swage
52 Lever operated,
Sliding swage
53 Lever operated,
54 Cam swage,
55 Idle swage,
56 Tools,
57 Anvils,
58 Setting
59 Rotary set,
60 Screw-operated set,
Pivoted set
61 Multiple,
62 Trip,
63 Lever operated
64 Pliers,
65 Idle,
Sliding set
66 Multiple,
67 Trip,

76. METAL TOOLS AND IMPLEMENTS—MAKING—Contd.

Saw making—
Setting—
Sliding set—
68 Lever operated
69 Pliers,
70 Idle,
71 Spring set,
72 Swage set,
73 Anvil set,
74 Guides,
75 Feeding
76 Clamp feed,
77 Tooth-engaging feed,
78 Clamps
79 Center supports,
80 Tooth inserters.

Machines
2 Auger
3 Clearing and lip cutting,
4 Die forming,
5 Drill forming and sharpening,
6 Eye-headed tool
7 Ax
8 Adjustable header,
9 Socket, strap, and tang tool,
10 Wrench,
11 Blank splitting.

Tool sharpeners
82 Cutting
82.1 Lawn mower.
82.2 Scissors,
83 Skate,
84 Butchers' steels.
85 Rotary,

76. METAL TOOLS AND IMPLEMENTS—MAKING—Contd.

Tool sharpeners—
Cutting—
Multiple cutter
86 Converging
87 Disks,
88 Cutter and guide
89 Disk,
89.1 Edge serrating,
89.2 Swaging.
90 **Dies**
91 Augers,
92 Axes, hammers, and hatchets.
93 Cutlery
94 Forks and spoons,
95 Drills,
96 Hoes, mattocks, and picks,
97 Pitchforks and rakes,
98 Pliers and tongs,
99 Shovels,
100 Wrenches.
101 **Blanks and processes**
102 Augers,
103 Axes, hammers, and hatchets,
104 Cutlery
105 Forks and spoons,
106 Hollow handles,
107 Dies,
108 Drills,
109 Hoes, mattocks, and picks,
110 Keys,
111 Pitchforks and rakes,
112 Saws,
113 Shovels,
114 Wrenches.

77 BORING AND DRILLING.

37 **Tapping mains**
38 Closed tool chamber
39 Multiple tool holder,
40 Valved
41 Permanent
42 Annular cutter.

Boring machines
1 Miscellaneous,
2 Portable,
3 Horizontal,
4 Vertical.

Drilling machines
5 Miscellaneous,
6 Independent motor,
7 Portable
8 Rail drills
9 Quick setting,
10 Ratchet,
11 Clamp frames,
12 Clamped, drilling, and tapping,
13 Clamped
14 Chain,
15 Flexible shaft,
16 Bow,
17 Cord-and-spring drive,
18 Center drills,
19 Bench,
20 Post,
Multiple spindle
21 Axially opposite,
22 Parallel axes
23 Circular gang,
24 Independent adjustment,

77 BORING AND DRILLING—Contd.

Drilling machines—
Multiple spindle—
25 Turret,
26 Radial axes,
27 Radial
28 Vertically adjustable arm,
31 Angular-spindle adjustment.

77. BORING AND DRILLING—Contd.

Drilling machines
29 Friction drive,
30 Treadle feed,
32 Feed mechanisms
33 Automatic stop,
34 Frictional,
35 Back gears,
36 Counterweights.

43 Ratchet drills, combination.
44 Ratchet drills
45 Self-feeding,
Double acting
46 Axially swinging lever,
47 Transversely swinging lever,
48 Reversible,
49 Axially yielding clutch,
50 Band grip,
51 Sliding pawl,
52 Wedging pawl
53 Roller grip,
54 Feed screws.

55 Appliances
56 Boring bars
57 Feed devices,
58 Boring heads,
59 Drill braces,
60 Drill holders,
61 Noncircular cut,
62 Jigs,
63 Work supports
64 Indexing.

65 Drills, combined
66 Drills and countersinks.

67 Drills
68 Oil conduit,
69 Annular,
70 Twist,
71 Tangs.

77. BORING AND DRILLING—Contd.

72 Reamers
73 Pipe burr,
73.5 Countersinks,
75 Adjustable
75.5 Wedge
76 Central cone.

78 METAL FORGING AND WELDING.

1 Forging
45 Toothed articles,
55 Tire upsetting
56 Circumferential,
57 Pivoted clamp
58 Single lever,
59 Sliding clamp,
46 Riveting
47 Calking,
48 Machines
49 Special,
50 Work supported,
51 Pipe,
52 Plate clamping,
53 Rotating tool,
53.5 Rivet holders,
54 Riveted joints,
9 Billet piercing
10 Fixed mandrel,
11 Rotary mandrel or billet,
12 Processes,
13 Power hammers and presses
13.1 Stippling,
14 Pipe swaging,
15 Shrinking,
16 Spoke securing,
17 Upsetting,
18 Die-inclosed work,
19 Traveling,
20 Hammer anvil
21 Cam operated
22 Adjustable dies,
23 Helved,
24 Multiple hammer,
25 Drop
26 Cam lift
27 Sliding head,

78. METAL FORGING AND WELDING—Continued.

Forging
Power hammers and presses
Drop
28 Crank lift,
29 Friction lift,
30 Winding lift,
31 Helved
32 Crank operated,
33 Olivers,
34 Revolving hammer,
35 Screw operated,
42 Fluid operated,
36 Sliding head
37 Adjustable guides,
38 Cam operated,
39 Crank operated
40 Cushioned,
41 Toggle operated,
43 Cushioned elements,
44 Anvils,
3 Anvil vises
4 Foot,
5 Anvils
6 Special work,
7 Attachments
8 Vises,
60 Dies
64 Carriage irons
65 Axles and axle boxes,
66 Clips and shackles,
67 Fifth wheels,
68 Kingbolts,
68.5 Plow and cultivator irons,
70 Eyebars and eyebolts,
72 Leather-workers' irons,
73 Railway-car irons
74 Axles and axle boxes,
75 Drawbars and couplings,

78. METAL FORGING AND WELDING—Continued

Forging
Dies
76 Railway-track irons,
77 Spinners' and weavers' irons,
78 Springs and spring clips,
79 Turnbuckles,
80 Wheels,
61 Upsetting
62 Heading bars,
63 Tubular articles,
81 Processes.
82 **Welding**
83 Tubes
84 Cross weld
85 Rolling,
86 Spiral weld,
87 Rolling
88 Rolls and mandrel,
89 End closing,
90 Rolling,
91 Welding strips,
92 Processes
93 Dissimilar metals,
94 Rings and tubes,
95 Blooms.
96 **Work-handling mechanism**
97 Wire or strip feeding,
98 Feeding and rotating,
99 Blank feeding,
100 Shifting,
101 Supports
102 Tables.
103 **Mandrels.**

79 BUTTON MAKING.

1 **Miscellaneous.**
2 **Shank buttons.**
3 **Metallic**
4 Covered
5 Cloth.
Pearl and composition
6 Surfacing and drilling,
7 Surfacing
8 Tool sharpening,
9 Multiple chuck,
10 Trimming,
Drilling
Multiple spindle
11 Axially opposite,
12 Multiple chuck,
13 Single chuck,
Single spindle
14 Single chuck,
15 Blank sawing
16 Tubular saw.
17 **Blank feeders.**
18 **Work supports.**

80 METAL ROLLING.

1 **Miscellaneous.**
2 **Heating and rolling.**
3 **Cutting and rolling.**
4 **Drawing and rolling.**
5 **Annular bodies.**
5.1 **Nurling.**
6 **Screw threads**
7 Concave and roll,
8 Platen rolling
9 Dies,
10 Rods and wires.
11 **Tubes**
12 Idle rolls,
13 Axial rolling,
14 Segmental rolls,
15 Skelping.
16 **Wheels and disks.**
17 **Reworking.**
18 **Concave and roll.**
19 **Platen and roll.**
20 **Platen rolling**
21 Disk platens.
22 **Axial rolling**
23 Pattern rolls.
24 **Die rolling**
25 Oscillating rolls,
26 Blank feeding and gauging,
27 Continuous,
28 Three or more coacting rolls,
29 Advancing and receding rolls,
30 Recurrent pattern.
31.1 **Mills**
32 Coiling,
33 Work reversing,
34 Three or more coacting rolls,
35 Continuous
36 Inclined trains,
37 Loop return,

80. METAL ROLLING—Continued.

Mills
38 Auxiliary supporting rolls,
39 Three high,
40 Idle rolls.
41 **Roll cooling and heating.**
42 **Cooling beds.**
43 **Feeding**
44 Tables
45 Horizontally and vertically movable,
46 Horizontally movable,
47 Vertically movable,
48 Shifters
49 Horizontally and vertically movable carrier,
50 Swinging carrier,
51 Guides and conductors
52 Loop return,
53 Work rotating.
54 **Gearing.**
55 **Housings.**
56 **Roll adjustments**
57 Relief devices.
58 **Rolls**
59 Pass arrangement.
60 **Processes**
61 Screw threads,
62 Tubes,
63 Rods and wires,
65 Reworking,
66 Flanged bars.

81 TOOLS.

1 Miscellaneous.
2 Combined wrenches and pumps or oilers.
3 Special
Receptacle closure removers
3.10 Combined or plural,
3.20 Power, vacuum and/or fluid pressure operated,
3.30 Wall or surface mounted or supported types
3.31 With receptacle supporting and/or grasping means
3.32 With bottom support,
3.33 Rotary remover device, gear or lever actuated,
3.34 Hand manipulated types
3.35 Movable into or over handle,
3.36 With additional receptacle engaging means
3.37 Lever or gear translated closure remover,
3.38 Receptacle or closure socket type,
3.39 With bottom support,
3.40 Gripping type
3.41 Finger grapple type,
3.42 With reciprocating closure engaging means,
3.43 With deformable strip tightening means,
3.44 With pivoted closure engaging parts,
3.45 Screw type,
3.46 Levering or pry-off type
3.47 With impaling or inserting remover,
3.48 Impaling or inserting type
3.49 With lateral projection or abutment,

81. TOOLS—Continued.
Special
3.5 Spectacle
3.6 Plier,
3.7 Leaf-spring spreaders,
3.8 Fuse pullers,
4 Engravers' clamps,
5.1 Plier type,
6 Watchmakers'
7 Jewel setters',
7.5 Mainspring winders,
8 Ruby-pin setters,
8.1 Packing,
9.1 Sealing,
9.3 Hose-clamp appliers.
9.5 Wire strippers
9.51 Bench tools.
10 Nut lock.
13 Bolt holders.
15 Bending
15.1 Cap and can cover straightening.
15.2 Repair tools for resilient tires
15.3 Tire bead spreaders,
15.4 Deflating tools,
15.5 Combined cement injectors and plug or patch inserters
15.6 Cement injectors,
15.7 Plug or patch inserters.
15.8 Skid chain applying tools.
17 Vises
18 Hand,
19 Round work,
20 Turret,
21 Pivoted jaw
22 Wedge-shaped work,
23 Adjustable fulcrum
24 Rack,
25 Cam,
26 Sliding jaw, cam,

81. TOOLS—Continued.
Vises
27 Rack lock
28 Toothed nut
29 Sectional,
30 Pivoted rack catch,
31 Sliding rack catch,
32 Nut operated,
33 Screw operated
34 Multiple intergeared,
35 Right and left threads,
36 Displaceable nut or screw,
37 Interrupted thread,
38 Jaw attachments
39 Round work,
40 Wedge-shaped work,
41 Mounts,
42 Parallel mechanisms.
43 Tweezers.
44 Pliers and tongs
45 Parallel pivoted rods,
46 Tandem levers,
47 Multiple jaw,
48 Expanding,
49 Locked jaws,
50 Sliding jaw,
51 Crossed handles
51.3 Adjustable pivot,
51.4 Pivoted jaw piece,
51.5 Parallel jaws,
51.6 Spring pressed,
52 Jaw attachments.
53 Wrenches
54 Machine
55 Bolt holding
56 Gear operated,
57 Gear operated,
71 Inserted
72 Expanding,

81. TOOLS—Continued.
Wrenches
74 Wheel operated
75 Hub-rim grasp
76 Internal,
Hand grip
78 Pivoted jaw
79 Crossed handles
80 Nontraveling fulcrum
81 Pivoted gripping piece,
82 Sliding gripping piece,
83 Slotted fulcrum guide,
84 Linked jaw and handle,
85 Sliding jaw
86 Claw lever and rack,
87 Lever and cam feed,
88 Lever and link feed,
89 Lever and pawl feed,
58 Clutched head
59 Segmental,
60 Ratchet
61 Pivoted pawl
62 Reversing
63 Single,
64 Flexible
65 Threaded adjustment,
66 Link
67 Claw,
68 Handle jaw
69 Pivoted,
70 Duplex,
73 U-crank arm,
77 Double ended, simultaneous adjustment,
91 Multiple pivoted jaws, handle-lever grip,
92 Pivoted inner jaw
93 Nut or screw fulcrum,

81. TOOLS—Continued.
Wrenches
Pivoted inner jaw
94 Pin fulcrum
95 Roller jaw
96 Pinion,
97 Spring pressed,
Pivoted outer jaw
Fixed fulcrum
98 Nontraveling jaw
99 Spring pressed,
100 Traveling jaw
101 Nut fulcrum,
102 Rocking sleeve
103 Spring pressed
104 Fulcrum washer,
105 Sleeve-inclosed nut,
106 Traveling fulcrum
107 Threaded handle bar
108 Axially rotating,
109 Slotted guide,
110 Fulcrum tooth and rack,
111 Pivoted side jaw
112 Bevel closing
113 Axial nut or screw,
114 Screw ring,
115 Rotating ring,
116 Wedge,
117 Rocking link,
118 Transverse-screw clamp,
126 Sliding jaw, handle-lever grip
127 Claw,
128 Sliding jaw, cam closing,
129 Sliding adjustments
130 Rack
131 Interlocking jaw handles,
132 Locking set screw or nut,

81. TOOLS—Continued.
Wrenches
Sliding adjustments
Rack
133 Pinion lock,
134 Pivoted rack catch
135 Nontraveling
136 Intermediate fulcrum,
137 Transverse,
138 Cam seated,
139 Indirectly operated,
140 Intermediate fulcrum,
141 Shank-engaged cam,
142 Sliding rack catch
143 Cam seated,
144 Screw or nut seated,
145 Spring seated,
146 Spring-seated jaw frame
147 Integral frame and teeth.
148 Wedge lock
149 Wedge pusher,
150 Shank grip
151 Side jaw,
152 Clutch yoke,
153 Roller clutch,
154 Locking incline,
155 Thread
156 Displaceable half nut,
157 Displaceable nut or screw
158 Traveling screw, shank rack,
159 Interrupted
160 Nut set
161 Traveling nut,
162 Traveling screw, shank rack,
163 Right and left threads,
164 Rotating threaded shank,
165 Sliding side jaw.

81. TOOLS—Continued.
Wrenches
Sliding adjustments
Thread
Nontraveling nut
166 Intermediate
167 Sliding outer jaw,
168 Terminal
169 Sliding outer jaw,
170 Nontraveling screw
171 Bracket bearing,
172 Shank sleeved,
173 Traveling nut
174 Threaded handle bar,
175 Traveling screw
176 Shank rack,
90 Spanners,
119 Rigid jaws
120 Round work,
121 Inclosed
122 Watch and clock keys
123 Dust protectors,
124 Safety,
124.1 With nut ejectors,
125 Work holding,
177 Handles and shanks,
178 Reversible jaws,
179 Sliding jaw face,
180 Attachments and adjuncts
181 Cutters
182 Rotary,
183 Roller clutch,
184 Shank embracing,
185 Socket reducers,
186 Jaw faces.

82 TURNING.

1 Miscellaneous.
1.1 Talking-machine tablet.
18 Pattern section
19 Cam-controlled cutter.
11 Axial pattern
14 Templet guide,
12 Pivoted tool rest,
13 Profiled cutter.
Tapers
15 Offset work axis,
Transversely shifted cutter
17 Templet controlled,
16 Gear controlled.
2 Lathes
7 Pulley,
8 Wheel and axle,
9 Crank and crank pin
10 Oscillating work,
5 Screw cutting
5.5 Swinging feed nut and tool bar,
4 Portable,
6 Bench,
3 Multiple,
20 Hollow cutter head,
21 Carriage feeds
22 Apron mechanism
23 Feed-nut controllers,
24 Slide rests
25 Multiple tool support,
26 Change gears,
27 Feed screws and rods,
28 Headstocks
29 Speed changing gear,
30 Spindles and bearings,
31 Tailstocks,
32 Beds,
33 Centers,
34 Attachments.

82. TURNING—Continued.

Rests

35 Tool and work,
36 Tool
37 Tool posts,
38 Work
39 Center rests.
40 **Work drivers**
41 Lathe dogs
42 Cam grip,
43 Mandrels
44 Expansible.
45 **Centerers.**

83 MILLS.

Chop graders

42 Flour processes.

Grain scourers

32 Centrifugal,
36 Concave face,
31 Conical,
30 Cylinder, horizontal,
29 Cylinder, vertical,
37 Disk face,
33 Pestle action,
35 Reciprocating and endless,
34 Screw action.

Grinding mills

17 Balancing millstones,
9 Ball and drum,
45 Chasing,
18 Coffee,
10 Compound movement,
13 Cone and shell,
12 Crushing rolls,
14 Cylinder and concave,

83. MILLS—Continued.

Grinding mills

7 Disk action, horizontal,
8 Disk action, vertical,
44 Combined with feed regulators,
15 Grain samplers,
23 Hominy,
46 Impact pulverizers,
6 Knife action,
1 Mill spindles,
3 Millstone dress,
4 Millstone exhaust,
2 Millstone trams,
22 Paint,
11 Rotary beaters.
91 **Liquid comminuting and solidifying.**
93 **Miscellaneous**
94 Processes.

Ore and coal

52 Coal breakers,
53 Crushers,
63 Ice crushers,
62 Ice picks and shavers,
57 Stamps.

Preparing grain

28 Processes,
27 Steaming and dampening.
61 **Sugar and salt crushers.**
75 **Wood and bark.**

84 MUSIC.

1 **Instruments**

1.01 Electrical tone generation and music instruments with electric translating devices
1.02 Combined with phonograph,
1.03 Automatic,

84. MUSIC—Continued.

Instruments

Electrical tone generation and music instruments with electric translating devices

1.04 With tuned sound wave generator or resonator
1.05 Regenerative type,
1.06 Tuned reproducer or resonator
1.07 Multiple current actuation
1.08 With selecting switch,
1.09 With volume control
1.10 Combined with tone actuator.
1.11 With selective control of tone partials
1.12 Tone partial intensity control,
1.13 With selective control of rate of attack or damping,
1.14 Electric coupling
1.15 Electromagnetic,
1.16 Stringed instruments,
1.17 With plural manuals,
1.18 Electro-optical type,
1.19 With selective control of tone partials
1.20 Wave interference type,
1.21 Tone partial intensity control,
1.22 Additive type
1.23 With harmonic used as fundamental,
1.24 With expression device
1.25 Tremolo or vibrato effect,
1.26 Control of rate of attack or damping,
1.27 Volume control,
1.28 With pattern or sound record type wave generator,

84. MUSIC—Continued.

Instruments

Automatic

2 Combined
3 Electric,
4 With phonograph
5 Electrical connections,
6 Pneumatic,
7 Stringed
8 With picking devices
9 Electric,
10 With bowing devices
11 Electric,
12 With striking devices,
13 Pianos
14 Without keys
15 Half width,
16 Constant power
17 Electric control
18 Key actuators,
19 Electric power
20 Key actuators
21 With expression
22 By voltage change,
23 With expression,
24 Pneumatic type
25 Key actuators,
26 Grands
27 Connections to piano action,
28 Action above keyboard,
29 Action below keyboard,
30 Location of parts,
31 With double tracker
32 Double length,
33 Expression mechanism
34 Parts of piano moved
35 Rest rail shifted
36 Normally in short stroke position,

84. MUSIC—Continued.
Instruments
Automatic
Stringed
Pianos
Pneumatic type
Expression mechanism
Parts of piano moved
Rest rail shifted
37 Position controlled from reservoir,
38 Graduated shift,
39 Wind pressure varied
40 By pumping,
41 By throttling,
42 By regulating chamber,
43 By use of two pressures,
44 Two cooperating pneumatics to each note,
45 Two opposing pneumatics to each note,
46 Transmission varied,
47 Systematic variations,
48 Pneumatic details,
49 Hand controllers,
50 Pneumatic construction
51 Both primaries and secondaries
52 Lower leaf moved,
53 Lower leaf moved,
54 Striker pneumatics in wind chest,
55 Units
56 Metal,
57 Tubes and junctions,
58 Bleeds
59 With valve,

84. MUSIC—Continued.
Instruments
Automatic
Stringed
Pianos
Pneumatic type
Pneumatic construction
60 Valves and seats
61 Inside,
62 Outside
63 Adjustable,
64 Screening and cleaning,
65 Power pneumatics
66 Connections to hammers
67 To key,
68 To abstract,
69 To wippen,
70 Wind-supply devices
71 In grands,
72 Pedals
73 Folding
74 With keylock,
75 With doors
76 Operating together
77 Door-carried pedal,
78 Upper panel moved,
79 Distribution,
Cases
80 Key slips,
81 Upper panel,
82 Lower panel,
83 Wind
84 Organs
85 Stop actions,
86 Cylinder,
87 Disk,
88 Electropneumatic action,

84. MUSIC—Continued.
Instruments
Automatic
Wind
Organs
89 Pneumatic action
90 With keys,
91 Pipe organ,
92 Organettes,
93 Mouth blown,
94 Combs
95 Cylinder type
96 Cylinder construction,
97 Disk type
98 With star wheels,
99 Multiple disks,
100 With phonograph spindle,
101 Note-sheet type,
102 Bars,
103 Bells,
104 Drums,
105 Outside players
106 Cylinder or disk,
107 Electric or electropneumatic,
108 Cabinet type
109 Case connectors,
110 Pneumatic,
111 Striker details,
112 Constant power
113 Electric control,
114 Pneumatic control,
115 Selectors
116 Tracker-box location,
117 Mechanical fingers,
118 Plurality of sheets
119 Synchronized,
120 Single tracker,
121 Sheet not rolled,
122 Winding and rewinding
123 With electric features,

84. MUSIC—Continued.
Instruments
Automatic
Selectors
Winding and rewinding
124 For two types of rolls,
125 Shifting gear and clutch,
126 Two clutches,
127 Gears,
128 Speed control
129 Roller and disk or cone,
130 By wind supply,
131 Compensation for diameter,
132 Feeding,
133 Rewinding,
134 Brakes,
135 Sheet pressers,
136 Registration
137 Movable detector at edge
138 Controlling shifter bellows
139 Single detector,
140 Extra end holes
141 Single end hole,
142 Extra center holes,
143 Flange shifted,
144 Hand operated,
145 Transposition only,
146 Trackers and sheets
147 Electric,
148 For organs,
149 Vertical,
150 Playing on wind and rewind,
151 Trackers
152 Double scale
153 Trackers rigidly connected
154 Pivotally mounted,
155 With slide valves,
156 Duct closers,

84. MUSIC—Continued.

Instruments

Automatic
Selectors
Trackers
157 Modified for expression,
158 Metal,
159 Extensible,
160 Pneumatoelectric,
161 Note sheets
162 Ends and joints,
163 Overlapping holes,
164 With expression and tempo marks,
165 With marks for voice,
166 With projections,
167 Key locks,
168 Couplers,
169 Indicators,
170 Combined
171 Electric,
172 Piano and organ,
173 Stringed
174 Pianos
175 Duplex,
176 Separable,
177 Cases
178 Fall boards and desks,
179 Fall boards,
180 Music desks or racks,
181 Music receptacles,
182 Swells,
183 Protectors,
184 Frames, string plates, and sounding boards,
185 Frames and string plates,
186 Frames,
187 String plates and sounding boards,

84. MUSIC—Continued.

Instruments

Stringed
Pianos
188 String plates,
189 Resonance devices
190 Supports or platforms,
191 Insulators,
192 Sounding boards
193 Materials,
194 Multiple,
195 Ribbing,
196 Crowning devices,
197 Stringing
198 Auxiliary strings,
199 Strings,
200 Tuning devices
201 Simple pin,
202 Locking devices
203 Involving two pins,
204 Worm gear.
205 Direct pull
206 With push piece,
207 With lever,
208 Transverse pressure,
209 Bridges
210 Inverted,
211 Agraffes,
212 On sounding board
213 With string holders,
214 String clamps or holders,
215 Depressing bars,
216 Expression devices
217 Dampers lifted,
218 Dampers held,
219 Pianissimo devices
220 Curtain type,
221 Hammer stroke shortened
222 Lost-motion preventers
223 In grand actions,

84. MUSIC—Continued.

Instruments

Stringed
Pianos
Expression devices
224 Auxiliary strikers,
225 Pedal mechanism
226 Locks.
227 Spring fulcrum,
228 Bearings,
229 Pedals
230 Auxiliary
231 Pedal carried,
232 With foot rest,
233 Mouse guards,
234 Harmonic dampers,
235 Couplers,
236 Hammer actions
237 Horizontal
238 Down striking,
239 Grand
240 Upright
241 Jack serving as retractor,
242 Standard type,
243 Details
244 Power-operated hammers
245 Sostenuto,
246 Electric striker,
247 Jack constantly controlled,
248 Inverted jack,
249 Jointed jack,
250 Action frames,
251 Flanges and joints
252 Continuous,
253 Checks.
254 Hammer heads,
255 Damper heads and stems,

84. MUSIC—Continued.

Instruments

Stringed
Pianos
256 Bowed or violin pianos
257 With belt bow,
258 Plectrum,
263 Combined,
264 Harps
265 Bodies,
266 Erard action,
267 Guitars,
268 Mandolins.
269 Banjos
270 Resonance devices
271 Closed back,
272 Two rings,
273 Mutes,
274 Violins
275 Bodies
276 Brass bars,
277 Sound posts,
278 Combined chin rest and support,
279 Chin rests,
280 Supports,
281 Positioning devices,
282 Bows,
283 Bow guides,
284 Dulcimers,
285 Zithers
286 Chord selectors
287 Damper-bar type
288 Dampers independent,
289 Guard-plate type,
290 Details
291 Bodies
292 Metal,

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84. MUSIC—Continued.
Instruments
Stringed
Details
293 Necks,
294 Resonance devices
295 Auxiliary strings,
296 With diaphragm,
297 Strings and fastenings
298 Guitar bridges,
299 Guitar bridges with tailpieces,
300 Banjo tailpieces,
301 Mandolin tailpieces,
302 Violin tailpieces,
303 Spools,
304 Tuning pegs
305 Friction increasers,
306 Worm gear,
307 Bridges
308 Banjo,
309 Violin,
310 Violin mutes
311 Attached,
312 Tunings,
313 Tremolo devices,
314 Finger boards and frets,
315 Fingering devices
316 For semitone,
317 For chords
318 Capo tastos,
319 Stopping fingers or blocks,
320 Picking devices
321 Picks on reciprocating carriage,
322 Hand or finger picks,
323 Hammer mechanism
324 Spring-shank hammer,
325 Bowing mechanism
326 With keyboard,

84. MUSIC—Continued.
Instruments
Stringed
Details
327 Instrument supports,
328 Arm, hand, or finger rests,
329 Article holders,
330 Wind
331 Pipe organs
332 Actions
333 Stop chambers,
334 Single chamber,
335 Pneumatic details
336 Membrane valve,
337 Electric,
338 Electropneumatic
339 Details,
Couplers
340 Pneumatic,
341 Electric,
342 Key valves,
343 Stop actions
344 Combination
345 Adjustable,
346 Swells
347 Electropneumatic,
348 Valve tremolos,
349 Pipes
350 Reed,
351 Reed organs
352 Cases
353 Pedals,
354 Folding,
355 Wind-supply devices
356 Pressure and exhaust,
357 Pedals
358 Auxiliary,
359 Distribution,
360 Reed boards
361 With qualifying tubes,

84. MUSIC—Continued.
Instruments
Wind
Reed organs
Reed boards
362 With resonance chamber,
363 Reeds
364 With tuning means,
365 Key actions
366 Pedal,
367 Pneumatic,
368 Pallets,
369 Stop actions
370 Combination,
371 Celeste,
372 Swells,
373 Couplers,
374 Fan tremolos,
375 Minor reed
376 Accordions,
377 Harmonicas
378 With resonance chambers,
379 Supports,
380 Wood winds
381 Duplex,
382 Clarinets
383 Mouthpieces.
384 Flutes,
385 Saxophones,
386 Pitch-changing devices,
387 Brasses
388 Valve type
389 With four valves,
390 Rotary movement,
391 Helical or sliding movement,
392 Piston details,
393 With substitute tubes,
394 Tuning devices,
395 Trombones
396 Tuning devices,

84. MUSIC—Continued.
Instruments
Wind
Brasses
397 Drainage,
398 Mouthpieces
399 Adjustable,
400 Mutes,
401 Tremolos,
402 Rigid vibrators
403 Bars and supports
404 With strikers,
405 With electric action,
406 Bells
407 With electric action,
408 Tongues,
409 Forks,
410 Resonators,
411 Drums
412 Collapsible,
413 Cord tighteners,
414 Head material,
415 Snares
416 Material,
417 Inside,
418 Tambourines,
419 Tympani,
420 Toy,
421 Supports,
422 Drum and cymbal beaters,
General features
423 Keyboards
424 Plurality of manuals,
425 Auxiliary
426 Pedal,
427 Plurality of touch-plates
428 Whole-tone scale,
429 Curved front,
430 Key bottoms
431 Folding,

84. MUSIC—Continued.

Instruments

General features

Keyboards

432 Key frames, adjustable,

433 Keys

434 Fulcrums and guides,

435 Fulcrums,

436 Guides,

437 Plating,

438 Manufacturing processes,

439 Touch regulators

440 Resistance,

441 Key holders,

442 Key selectors,

443 Chord players

444 Pedal operated,

445 Transposers

446 Auxiliary keyboard,

447 Keyboard shifted,

448 Intermediate parts shifted,

449 Sounders shifted,

450 Solo attachments,

451 Special or enharmonic scales,

452 Materials.

453 **Accessories**

454 Tuning devices

455 Strings,

456 Pipes and reeds,

457 Forks,

458 Tools and machines

459 Tuning hammers,

460 Felt pickers,

461 Recording devices

462 Electric,

463 Applying expression lines,

464 Producing color or light effects,

465 Exercising devices

466 For singers,

84. MUSIC—Continued.

Accessories

Exercising devices

467 For pianists

468 Attached to performer,

469 Arm-rest rail,

470 Teaching devices

471 Charts or boards

472 Easel type,

473 With transposing slide,

474 With transposing dial,

475 For transcribing,

476 Blocks,

477 Indicators

478 For keyboard

479 Single position

480 With transposing slide,

481 Plurality of cards,

482 Shiftable,

483 Tune sheets,

484 For tempo,

485 For fingering,

486 Leaf turners

487 Motor operated,

488 Gravity operated,

489 Hand and spring operated arms,

Spring-operated arms

490 Plurality of latches

491 Fixed latches,

492 Plurality of releasers

493 Latches and releasers pivoted

494 Integral,

495 Single latch

496 Fixed latch,

497 Sliding latch,

498 Escapement

499 Air operated,

84. MUSIC—Continued.

Accessories

Leaf turners

500 Single spring arm

501 Latch and releaser integral,

502 Player-operated arms

503 Plurality of actuators

504 Plurality of finger pieces

505 Actuators pivoted,

506 Actuators and finger pieces integral,

507 Single finger piece,

Single actuator

508 Progressive action

509 Arms and actuator on different axes

510 With segmental gear,

511 Sliding actuator,

512 With segmental rack,

513 Repeating action

514 Arms and actuator on different axes

515 Sliding actuator,

516 Single arm,

517 Single transfer bar

518 With buckling devices,

519 With suction devices,

520 Leaves prepared

521 With magnetic disks.

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85 DRIVEN, HEADED, AND SCREW-THREADED FASTENINGS.

1 **Bolts**
1.5 Stay,
2 Expanding core,
2.4 Expanding sleeve
2.8 Double wedge,
3 Pivoted end lock,
4 Lapped,
5 Threadless
6 Axial wedge,
7 Key lock
8 Bifurcated,
8.5 Keys and cotters,
9 Heads.
32 **Nuts**
32.1 Flanged coupling,
35 Capped,
33 Adjustable thread,
36 Threadless,
34 Blanks.
41 **Screws**
42 Double ended,
43 Countersinking,
44 Drive,
45 Driving contacts,
46 Threads
47 Interrupted,
48 Rolled.
37 **Rivets**
38 Divided,
39 Double clench,
40 Hollow.
49 **Staples.**

85. Driven, Headed, and Screw-Threaded Fastenings—Continued.

10 **Nails, spikes, and tacks**
12 Horseshoe nails,
15 Glaziers' points,
13 Multiple pronged,
14 Double ended,
23 Locking devices
24 Rail flange,
25 Rail tread,
26 Point spreaders,
27 Transverse key,
11 Sheet metal,
16 Tacks
17 Strips,
18 String nails,
22 Threaded and indented wire,
21 Barbed and indented,
19 Longitudinally ribbed,
20 Spiral shank,
28 Heads
29 Pronged,
30 Points
31 Deflecting.
50 **Washers**
51 Removable,
52 Ornamental.
53 **Ornamental heads**
54 Molded,
55 Clip attached,
56 Screw attached.

86 AMMUNITION AND EXPLOSIVE-CHARGE MAKING.

1 **Miscellaneous.**
Ammunition making
10 Caps and cartridges
11 Paper shells
12 Assembling,
17 Shell lining and varnishing,
19 Lubricating.
20 **Loading fireworks and bursting charges**
21 Implements
22 Fuse.
23 **Ammunition loading**
25 Loading and shell closing
26 Rectilinear shell feed,
27 Rotary shell feed,
28 Implements,
29 Filling and ramming
30 Rammers,
31 Filling
32 Cap and cartridge priming,
33 Implements,
36 Capping and uncapping
37 Implements
38 Magazine,
39 Crimping
40 Implements,
41 Crimper heads,
42 Bullet patching,
43 Bullet setting,
44 Shell holders,
24 Implements.
45 **Feeding devices**
46 Shell.
47 **Cartridge packing**
48 Belt loading.

87 TEXTILES, BRAIDING, NETTING, AND LACE MAKING.

PROCESSES AND PRODUCTS

1 **Coated or impregnated,**
2 **Elastic,**
3 **Intertwisted strands**
4 Twist or bobbinet lace,
5 **With material incorporated in diverse ways**
6 Tubular fabric with core,
7 Braided with unbraided material,
8 **Braided**
9 Tubular,
10 Lace,
11 Variable form,
12 **Knotted mesh,**
13 **Miscellaneous.**

APPARATUS

14 **With pattern mechanism**
15 With electric or fluid operated means,
16 For braiding apparatus with movable switch for carrier,
17 For braiding apparatus of arrestable carrier type,
18 **With stopping or starting**
19 Electrical,
20 **With automatic control**
21 Let offs
22 Ratchet type,
23 **With coating or impregnating,**
24 **Intertwisted strand type**
25 Portable
26 With diverse material incorporating,
27 Twist or bobbinet lace,

87. TEXTILES, BRAIDING, NETTING, AND LACE MAKING—Continued.

APPARATUS

28 **With diverse material incorporating**
29 Tubular fabric with core,
30 Braided with unbraided material,
31 **With take up,**
32 **Combined,**
33 **Braiding**
34 With mandrel or form,
35 With die or shaper,
36 With beater or strand layer,
37 With movable switch for carrier
38 Carrier actuated,
39 Arrestable carrier type
40 With clutch,
41 With braid variation,
42 Interlocking twist type,
43 With reciprocating carrier,
44 Concentric circular orbit type
45 Rack and gear carrier propellers,
46 Intermittently retractible carrier propellers
47 Rotating,
48 Strand deflecting devices,
49 With strand anti-twist means,
50 Carrier propelling and/or guiding means
51 Without race plate.
52 **Tatting.**
53 **Knotted mesh fabric.**

87. TEXTILES, BRAIDING, NETTING, AND LACE MAKING—Continued.

APPARATUS

54 **Shuttles, carriages and/or threading and loading or unloading devices**
55 Braiding carriers
56 With strand tensioning means
57 Let offs,
58 Tatting type
59 With rewinding means,
60 Seine needles,
61 **Strand tensioners,**
62 **Miscellaneous.**

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88 OPTICS.

1 **Miscellaneous.**
1.5 **Camera finders.**
Geometrical instruments
2.2 Fiducial
2.3 Single deflected image
2.4 Deflection adjustment,
2.6 Multiple deflected image
2.7 Deflection adjustment.
56 **Lens testers.**
14 **Testing instruments**
14.1 Egg candling
14.2 Combined,
14.3 Externally illuminated,
14.4 Lamp attachment,
14.5 With conveying or transfer means
14.6 With dumping or inverting trays,
14.8 Endless or rotary,
14.9 Box
14.91 With electric lamp control,
14.92 Side opening.
15 **Kaleidoscopes.**
16 **Motion-picture apparatus**
16.2 Combined with sound producers,
16.4 Color,
16.6 Multiplex,
16.8 Optical rectifiers,
17 Picture strip
18 Intermittent feed
18.2 Intermittently rotated feed-drum
18.3 Geneva-gear type,
18.4 Intermittent-grip type
18.5 Rotary,
18.6 Film-beater type,
18.7 Nonrewinding,

88. Optics—Continued.

Motion-picture apparatus
18.8 Rotary picture disk,
19 Book-leaf type,
19.1 Unconnected picture plates,
19.3 Shutters
19.4 Speed controlled,
19.5 Picture vehicles and elements.
20 **Optometers**
22 Multiple lens.
22.5 **Optical pyrometers.**
23 **Photometers.**
24 **Projecting apparatus**
25 Heliostats,
26 Magic lanterns
27 Rotary slide carrier,
28 View-changing devices.
28.90 Screens
28.91 Collapsible or folding,
28.92 With sound transmitting characteristics,
28.93 Translucent or rear projection type.
29 **Stereoscopes**
30 Album,
31 View changing.
32 **Telescopes**
33 Prismatic,
34 Field and opera glasses
35 Folding and collapsible,
36 Supports
37 Focusing,
38 Reflecting attachments.
39 **Microscopes**
40 Accessories.

88. OPTICS—Continued.

41 **Eyeglasses and spectacles.**
42 Connections,
43 Bridges
44 Folding,
45 Spring
46 Bar,
47 Lens mounts,
48 Nose grips
49 Adjustable
50 Automatic,
51 Supports,
52 Temples
53 Connections,
54 Lenses
54.5 Eye contact type,
55 Nose guards.

57.5 **Building lights**
58 Canopy,
59 Vault,
60 Window.

57 **Lenses.**
61 **Light valves.**
65 **Polarizers.**
68 **Periscopes**
69 Combined with structure
70 Land vehicle,
71 With lights,
72 With lens.

73 **Mirrors and reflectors**
74 Special instruments
75 Amusement or advertising,
76 Image distorting,
77 Anti-glare,
78 Signal
79 Street surface type,
80 Body carried,
81 Vehicle carried,
82 With lens,

88. OPTICS—Continued.

Mirrors and reflectors.
83 Window,
84 Plural
85 Combined with structure
86 Vehicle,
87 Vehicle type,
88 Bureau type,
89 Hand type,
90 Stand type,
91 Wall type,
92 Combined with structure
93 Vehicle,
94 Tool or instrument
95 Dialed instrument,
96 Frames and holders
97 With support
98 Vehicle type,
99 Bureau type,
100 Door type,
101 Body,
102 Hand
103 With handle stand,
104 Orifice,
105 Structure and process.
106 **Filters**
107 Fluid,
108 Graduated,
109 Multilayer, coated or impregnated
110 With metal,
111 Plural
112 Superimposed,
113 With support,
114 Materials
115 Cellulose.

89 ORDNANCE.

1 **Miscellaneous.**
1.5 **Bomb, flare, and signal dropping.**

89. ORDNANCE—Continued.

5 **Submarine.**
Automatic
2 Gas operated.
3 Recoil operated.
4 **Semiautomatic.**
Pneumatic
7 Explosive charge.

8 **Accelerating.**
9 **Machine guns**
11 Axially moving breech block,
12 Revolving barrels,
13 Revolving cylinder.
14 **Barrels**
15 Wound,
16 Composite.

17 **Breech closures**
18 Key locked,
19 Screw
20 Interrupted
21 Fixed ammunition,
22 Transverse
23 Sliding and swinging,
24 Sliding,
25 Swinging,
26 Gas checks.

27 **Firing devices**
28 Electric.
29 **Practice barrels.**
30 **Vents and stoppers.**
31 **Tompions and valves.**
33 **Cartridge feeding**
34 Holders,
35 Belts.

36 **Shields.**
37 **Mounts**
37.5 Airplane.
38 Disappearing gun
39 Counterpoise,

89. ORDNANCE—Continued.

Mounts
40 Field,
41 Training mechanisms,
42 Recoil checks
43 Fluid,
44 Spring.
45 **Loading**
46 Hoisting apparatus,
47 Rammers.

90 GEAR CUTTING, MILLING AND PLANING.

1 **Gear cutting**
1.4 Gear chamfering,
1.6 Gear shaving,
2 Pattern controlled,
3 Generating
4 Hobbing,
5 Face mill cutter,
6 Arcuate generating movement,
7 Rotary gear-shaped tool
7.5 Plural tool,
8 By reciprocating cutter,
9 Rotary cutter
9.4 Face mill type,
9.6 Plural rotary cutter,
10 Reciprocating cutter.
11 **Milling**
12 Portable
12.5 Valve refitting,
13 Pattern controlled
13.05 Key cutting machines,
13.1 Reproducing
13.2 Duplicating
13.3 Rotary work
13.4 Automatic,
13.5 Automatic,
13.6 Rotary work
13.7 Automatic,
13.8 Automatic,
13.9 Rotary work,

90. GEAR CUTTING, MILLING, AND PLANING—Continued.

Milling

Movable cutter axis
14 Axial,
15 Lateral
15.1 Work indexing,
16 Adjustable cutter axis
17 Angular,
18 Stationary cutter axis
19 Vertical,
20 Rotating work holder,
20.5 Overarm and harness structure,
21 Work feeds
21.5 Fluid operated,
22 Backlash compensators,
23 Tail stocks.
24 **Planing**
24.3 Pattern controlled
24.4 Electromagnetically controlled tool
24.5 Rotary work,
25 Soft metal
26 Cylindrical stereotypes,
27 Double-rack cutter drive,
28 Roller feed,
Curved surfaces
28.1 Rifling,
29 Roll grooving,
30 Cycloids,
31 Laterally moving cutter,
32 Laterally moving work,
33 Broaching,
Planers
34 Reciprocating bed
35 Rack drive,
36 Screw drive,
37 Cross rails,

90. GEAR CUTTING, MILLING, AND PLANING—Continued.

Planing

Planers
Reciprocating cutter
38 Horizontal
39 Oscillating link drive,
40 Crank drive,
41 Rack drive,
42 Screw drive,
43 Vertical
44 Crank drive
45 Inverted,
46 Rack drive
47 Inverted,
48 Reversing mechanisms,
49 Tool feeds
50 Clutch boxes,
51 Stop mechanisms,
52 Tool heads
53 Oscillating double cutter,
54 Pivoted cutter release,
55 Cutter lifters.
56 **Indexing**
57 Index heads.
58 **Work tables.**
59 **Work holders**
60 Machine vises
61 Angularly adjustable jaws.
62 **Patterns, tracers and tools.**

91 COATING.

Special machines
1 Bordering letter paper,
2 Confections and pills
3 Fountain,
4 Immersion
5 Chargers,
6 Dipping implements,
7 Rumble,
7.5 Electrotype molds,
10 Photographic film and plate,
11 Pitching casks,
With metal
12.1 Combined machines,
12.2 Miscellaneous,
12.3 Plates
12.4 Mirrors,
12.5 Immersion
12.6 Work conveying
12.7 Rolls,
8 Flocking,
9 Marbling,
12 Striping
12.01 Yarn.
13 **Combined machines**
14 Coating and cutting
14.5 Strip servers,
15 Coating and folding,
16 Coating and printing,
17 Coating and stretching.
18 **Machines**
19 Brush, fountain, and roller,
20 Brush, fountain, and scraper,
21 Brush, immersion, and roller.
22 Brush, immersion, and scraper,
23 Fountain, roller, and web.
24 Immersion, roller, and scraper,

91. COATING—Continued.

Machines
25 Brush and fountain,
26 Brush and immersion,
27 Brush and roller,
28 Brush and web,
29 Fountain and roller,
30 Fountain and scraper,
31 Immersion and roller,
32 Immersion and scraper,
33 Roller and scraper,
34 Roller and web,
35 Scraper and web,
36 Abrasion,
37 Brush
38 Capillary feed,
39 Fountain feed,
40 Roller feed,
41 Tank feed,
42 Centrifugal,
43 Fountain
44 Projection
45 Air brush,
46 Immersion,
47 Impression,
48 Roller
49 Fountain feed,
50 Roller feed,
51 Tank feed,
52 Rumble,
53 Scraper,
54 Web.
54.3 **Copying-pad baths.**
54.4 **Pads and forms**
54.5 Inking,
54.6 Copying,
54.7 Waxing or oiling
54.8 And cleaning.

91. COATING—Continued.
With metal
59.1 Finishing
59.2 Rolls,
59.3 Separators,
59.4 Wipers,
59.8 Crystallizing.
55 Driers and coolers.
56 Elevating devices.

58 Strippers.
59 Wipers and dusters.
60 Work holders
61 Enameling tables,
62 Gripper mechanisms.
62.5 Implements
62.6 Striping,
63 Brush holders and cleaners,
65 Paint protectors,
66 Pots,
67 Sanders,
67.1 Mucilage holders
67.2 Brushes,
67.3 Scrapers,
67.4 Spreaders
67.5 Flexible cap.
67.8 Roller structure.
67.9 Fabric coating and printing
67.95 Fraud preventing or detecting.
68 Processes
69 Photographic film and plate,
69.1 Mirrors or reflectors,
70 With heat
70.1 With metal
70.2 Molten
70.3 Preparation,
71 Japanning,
72 Vitreous
73 On metal,

91. COATING—Continued.
Processes
68.1 With metal
68.2 Combined with electrodeposition.
68.3 Precipitation.

92 PAPER MAKING AND FIBER LIBERATION.

1 Stock treatment.
2 By-product recovery,
6 Combined grinding and digesting,
7 Digestive
11 Acid, sulfurous
12 Fiber,
13 Alkaline
14 Special paper stock.
16 Bleaching feature
17 Fiber,
15 Fiber,
9 Miscellaneous reagents
10 Fiber,
8 Fiber,
18 Rotary digesters,
19 Shells and linings,
3 Special paper stock,
4 Fiber.

20 Stuff working
21 Special material incorporating,
22 Beating engines
23 Screen attachment,
24 Horizontal course,
25 Vertical course,
26 Refining engines
27 Cone and shell,
28 Sand separators,
29 Strainers
30 Flat screen
31 Horizontal stationary
32 Vertically vibrating diaphragm,
33 Shaking,
34 Cylindrical stationary screen,
35 Cylindrical rotating screen, outward flow,

92. PAPER MAKING AND FIBER LIBERATION—Continued.
Stuff working
Strainers
36 Cylindrical rotating screen, inward flow,
37 Stuff chests.
38 Web forming
39 Special work
40 Special material incorporating
41 Cylinder machines,
42 Cylinder machines,
43 Cylinder machines,
44 Fourdrinier machines
45 Shake frames,
46 Feed regulators,
47 Couch rolls,
48 Dandy rolls and watermarking devices,
49 Press rolls and felts,
50 Felt and wire cleaners,
51 Suction boxes
52 Traveling face
53 Cylindrical.
54 Pulp molding
55 Special material and object incorporating,
56 Combined submerging and compressing,
57 Submerged mold,
58 Centrifugal action,
59 Compressors
60 Elastic diaphragm,
61 Sheet and board forming,
62 Contractible matrix
63 Piston closing.
64 Toggle closing,
65 Wedge closing,
66 Winders
67 Sheet and board forming.

92. PAPER MAKING AND FIBER LIBERATION—Continued.

68 **Finishing**
69 Wrinkling,
70 Flexibility imparting,
71 Calendars
72 Reciprocating polisher,
73 Stacked-rolls type
74 Doctors and guides,
75 Pressure regulators,
76 Damping devices,
77 Rolls.

93 PAPER MANUFACTURES.

1 **Miscellaneous.**
1.1 **Paper fastening.**
1.2 **Seed tape machines.**
1.3 **Disc closures.**
Wrapping machines
2 Miscellaneous,
3 Receptacle making and filling,
4 Packet making and wrapping,
6 Receptacle filling and closing,
5 Crimpers and twisters,
7 Traveling carrier.
Bag machines
8 Miscellaneous,
Triangular fold
9 Blade and roller,
10 Mandrel,
11 Plate mandrel,
12 Rectangular mandrel,
13 Central fold,
14 Web formers, cutters, openers, and closers
15 Openers, roll,
16 Openers, side,

93. PAPER MANUFACTURES—Con.

Bag machines
17 Web formers, cutters and openers,
18 Web formers, cutters and closers,
19 Web formers and cutters,
20 Web formers,
21 Cutters, openers, and closers,
22 Openers and closers
23 Openers, roll,
24 Openers, side,
25 Cutters and openers,
26 Cutters and closers,
27 Closers,
28 Openers
29 Roll,
30 Side,
31 Hand bottom folders, tables,
32 Refolders,
33 Cutting,
34 Printing attachments,
35 Methods.
Box machines
36 Miscellaneous,
36.01 Lining forming and inserting,
36.05 Cups, non-circular cross-section,
36.1 Conical former
36.2 Rotary,
36.3 Presses,
36.4 Pasters or gluers,
36.5 Edge crimping and spinning,
36.6 Box blank covering,
36.7 Applying bails,
36.8 Cups or tubes, folded over end,
36.9 Taping devices,
37 Cell cases
38 Traveling carrier, shifting form,
39 Folding and setting up
39.1 Tube and end closing
39.2 Turret form carrier
39.3 Frustro-conical form,

93. PAPER MANUFACTURES—Con.

Box machines
40 Folding and covering
40.1 Rotary banding,
41 Folding and staying
41.1 Metallic stay,
42 Folding and stapling,
43 Setting up and covering,
44 Endless mandrel carrier
44.1 Turret mandrel carrier,
45 Folding, web supply
46 Driers,
47 Plunger and die,
48 Stationary folders,
49 Folding
50 Driers,
51 Plunger and die
51.1 Circulating mandrel,
52 Stationary folders,
53 Refolding and/or opening,
54 Covering
54.1 Rotary support,
54.2 Reciprocating support,
54.3 Stationary support,
55 Setting up
55.1 Applying end closures,
56 Staying,
57 Fly affixers,
58 Cutting and scoring
58.1 Rotary scorers,
58.2 Rotary cutters and scorers,
58.3 Reciprocating cutters and scorers,
58.4 Cutters
58.5 Thumbhole or peephole cutters,
59 Mandrels and dies,
60 Plaiting.

93. PAPER MANUFACTURES—Con.

Envelop machines
61 Miscellaneous,
Rotary
62 Blank supply,
63 Web supply,
Reciprocating
64 Web supply,
65 Turret,
66 Gumming and folding,
67 Folding,
68 Gumming
69 Picker faces,
70 Creasing mechanism,
71 Carrying mechanism,
72 Ejecting mechanism,
73 Printing and stamping,
74 Drying
75 Chain discharging,
76 Thread affixers.
Tube machines
77 Miscellaneous,
78 Fuse making,
79 Tapering wind,
80 Spiral wind,
81 Convolute wind,
82 Axial feed,
83 Sizing and burnishing.
Tag machines
87 Miscellaneous,
88 Pin-ticket making and attaching,
89 Pin-ticket making,
90 Eyeletting,
91 String attaching,
92 Washer attaching.
Folding
84 Miscellaneous,
85 Powder-paper machines,
86 Radial fold.
93 **Bunching and banding.**
Tube
94 Methods.

94 ROADS AND PAVEMENTS.

1 **Roads.**
1.5 **Traffic guides and street markers.**
2 **Pavements**
3 Floors,
4 Structure
5 Antislip surface,
6 Combined sheet and block,
7 Sheet
8 Reenforced or surfaced,
9 Bituminous,
10 Hydraulic cement,
11 Block or other preformed elements
12 Reenforced,
13 Interlocking or overlapping,
14 Spaced,
15 Capped,
16 Beds,
17 Joints
18 Expansion,
19 Composition
20 Bituminous,
21 Hydraulic cement,
22 Processes
23 Bituminous,
24 Hydraulic cement,
25 Dust prevention,
26 Side or cross walks
27 Light transmitting
28 Concrete frame,
29 Lenses and lens mounts,
30 Gratings.
31 **Curbs or gutters**
32 Corner protectors.
33 **Drains.**
34 **Vault covers**
35 Locking,
36 Hinged,

94. ROADS AND PAVEMENTS—Con.

Vault covers
37 Ventilated,
38 Guards.
39 **Apparatus**
40 Material preparation
42 Material heating and treating,
44 Material distributing and surface treating,
45 Smoothing or marking
46 Material feeding,
47 Block laying,
48 Rammers
49 Hammers,
50 Rollers,
51 Expansion joint.

95 PHOTOGRAPHY.

1 **Miscellaneous.**
1.1 **Exposure identification.**
2 **Color.**
3 **Daguerreotypy**
4 Vises.
4.5 **Phototypographs.**
6 **Sensitizing and developing.**
7 **Sensitizing.**
8 **Sensitized elements**
9 Films.
10 **Actinometers.**
11 **Cameras**
12 Combination,
12.5 Aerial,
13 Developing
14 Automatic,
15 Panoramic
16 Concave surface,
17 Convex surface,
18 Simultaneous exposure,
19 Magazine
20 Hand-changed plate,
21 Tilting magazine,
22 Flexible plate carrier,
23 Sliding plate
24 Sliding and return,
25 Continuous guides,
26 Intermediate exposure chamber,
27 Quarter-turned plate
28 Tilting
29 Base guides,
30 Rear-plate replacing.
31 Roll holding
32 Folding
33 Hinged bellows,
34 Posterior rolls,

95. PHOTOGRAPHY—Continued.

Cameras
36 Successive plate section
37 Shifting lens or plate
38 Rotary,
39 Folding
40 Hinged base,
41 Plate-holder storage,
42 Exposure-lens finder,
44 Focusing
45 Adjusting mechanism,
46 Guides and locks,
47 Hoods,
48 Reversible back,
49 Ground glasses and frames,
50 Swing front or back,
51 Shift front or back,
53 Shutters
54 Fluid-operating mechanisms,
55 Sliding
56 Opposite movement,
57 Curtain,
58 Pivoted
59 Blade
60 Blade and cover blind,
61 Rotary,
62 Opposite movement
63 Symmetrical opening,
64 Diaphragms,
65 Vignetters,
66 Plate holders
67 Light seals,
68 Plate fastenings and kits
69 Adjustable,
70 Solution drains and resistants,
71 Closure locks and checks,
72 Auxiliary.
73 **Printing**
74 Superposed negative,
75 Continuous film,

95. PHOTOGRAPHY—Continued.

Printing

76 Fluid-pressure contact,
77 Frames
77.5 Cylindrical,
78 Stands,
79 Vignetting
80 Frame-attaching mechanisms.
81 **Screens**
81.5 Color.
82 **Studios.**
83 **Backgrounds**
84 Rolling curtain.
85 **Models.**
86 **Camera supports.**
88 **Developing.**
89 **Fluid-treating apparatus.**
90 Dark cabinets
90.5 Roll film,
91 Hand insertion
92 Ventilated,
93 Rotating carriers,
94 Film guides,
95 Trays,
96 Tanks
97 Washing
98 Plate supporting,
99 Rocking mechanisms,
100 Work-handling devices.
101 **Retouching**
102 Stands
103 Vibrating.
104 **Burnishing**
105 Rotary machines
106 Internally heated.
5 **Processes**
5.1 Multicolor-printing surface
5.2 Planographic,
5.3 Photo etching,
5.4 Planographic-printing surface,

95. PHOTOGRAPHY—Continued.

Processes

5.5 Vitreous colors,
5.6 Relief or intaglio
5.7 Photo-etching.

96 TEXTILES, BRAIDING, NETTING, OR LACE MAKING.

1 **Miscellaneous.**
2 **Braiding**
3 Incorporating unbraided material,
4 Interlocking twist type,
5 Circular-orbit type
6 Inclined shuttle carrier,
7 Horizontal shuttle carrier,
8 Sinuous orbit type
9 Without race plate,
10 Special braids
11 Pattern controlled,
12 Driving and switching,
13 Carriers
14 Hollow spindle,
15 Ratchet let-off,
16 Shaping,
17 Beaters,
18 Take-up mechanisms,
19 Stopping and starting.
20 **Twist or bobbinet lace making.**
21 **Knotted mesh fabric making.**
22 **Tatting.**
23 **Strand or fabric structure**
24 Lace,
25 Braided
26 With unbraided element,
27 Variable form,

97 PLOWS.

1 **Miscellaneous.**
2 **Plows and cultivators.**
3 **Plows and rollers.**
4 **Plows and harrows**
5 Harrow attachments
6 Revolving.
7 **Cultivators and rollers.**
8 **Cultivators and harrows.**
9 **Cultivators and scrapers.**
10 **Soil elevators and treaters.**
11 **Cotton-chopper type**
12 Plant thinner and cultivator,
13 Reciprocating and oscillating chopper,
14 Rotary chopper
15 Longitudinal axis,
16 Transverse axis,
17 Vertical axis,
18 Reciprocating,
19 Oscillating,
20 Endless chain,
21 Opening and closing,
22 Rolling,
23 Scraper.
24 **Alternating and hillside**
25 Motor propelled,
26 Axially rotatable implement,
27 Central wheeled frame,
28 Tilting beam,
29 Parallel separate implements,
30 Horizontally reversible beam,
31 Implement shifted for opposite throw
32 With wheel turning,
33 Shiftable moldboard.
34 **Driven implement**
35 Combined driven implement and cultivator,

97. PLOWS—Continued.

Driven implement

36 Reciprocating and oscillating implement,
37 Rotary
38 Longitudinal axis
39 Spiral,
40 Transverse axis
41 Spiral,
42 Rod,
43 Vertical axis,
44 Reciprocating,
45 Oscillating,
46 Endless chain.
47 **Motor propelled**
48 Steered by walking attendant,
49 Automatic steering attachments,
50 **Motor-operated frame or implement lifts.**
51 **Furrow-evening lifts.**
52 **Rolling implement**
53 Disk plows,
54 Disk cultivators.
55 **Irrigating-furrow formers and blockers.**
56 **Ridging and covering**
57 Hilling.
58 **Hand-propelled machines**
59 Wheeled,
60 Horizontally rotatable.
61 **Hand cultivating tools**
62 Combined hoe and weeder,
63 Weeders
64 Adjustable teeth,
65 Hoes
66 Compound blades
67 Adjustable,
68 Horizontal blades
69 Adjustable,
70 Adjustable blades,

97. PLOWS—Continued.

Hand cultivating tools

71 Toothed blades,
71.1 Handles.
72 **Draft-operated frame or implement lifts**
73 Crank-axle clutch,
74 Lifting leg,
75 Draft link.
76 **Foot-operated lift.**

Plows

77 Flexibly connected gangs,
78 Subsoil
79 Attachments,
80 Multiple levels,
81 Wheeled
82 Freely suspended plow
82 Combined frame leveling and plow lift.
84 Frame leveling,
85 Raising and lowering
86 Plow and colter in unison,
87 Vertical translation
88 With lateral adjustment,
89 Swinging
90 With lateral adjustment,
91 With vertical adjustment,
92 Compound movement,
93 Gang plows
94 Gang supporting frames,
95 Gang-plow units,
96 Vertical adjustment,
97 Lateral adjustment,
98 Frame and trailing plow adjusting connections,
99 Suspended plow structure,
100 Rigid frame and plow
101 With adjustable wheel mount
102 Front and rear simultaneously adjustable,

97. PLOWS—Continued.

Plows

Wheeled
Rigid frame and plow
With adjustable wheel mount
103 Rotary crank-axle mount,
104 Plows laterally adjustable,
105 Plow offset,
106 Beam, body, and handle
107 Multiple beam and body,
108 Multiple body,
109 With shoe or runner,
110 Shovel type,
111 Sliding-moldboard type
112 Listers,
113 Plow-body construction
114 Landslide,
115 Moldboard
116 Friction reducing,
117 Furrow slice cutters,
118 Hinged,
119 Revolving
120 Belt,
121 Disk,
122 Roller,
123 Skeleton,
124 Quick-detachable elements,
125 Points and shares,
126 Shoe and guide,
127 Adjustable casters and caster locks,
128 Carrier and beam connection,
129 Attachments
130 Riding,
131 Front truck,
132 Antifriction devices,
133 Trailing sweep,
134 Supplemental moldboard.
135 **Cultivators**
136 Tree or stake guided,

97. PLOWS—Continued.

Cultivators

137 Orchard,
138 Wheel-inclosing gangs or frames,
139 Convertible riding or walking,
140 Lister-furrow-guide type
141 With laterally hinged cultivators,
142 With guide rollers,
143 Multiple row,
144 Wheel supported
144.1 Scraping weeders,
145 Freely suspended cultivator
146 Mast and link,
147 Seat-counterbalanced beams,
148 Combined beam lift and frame balance,
149 Straddle row
150 Parallel rule frame,
151 With supplemental implements,
152 Multiple rows,
153 Tongueless,
154 Cultivator beams laterally guided
155 Unison with guide wheels,
156 With beam lift,
157 Cultivator-beam lift
158 Translational,
159 Cultivator-beam adjustment,
160 Cultivator-beam spreaders,
161 Suspended cultivator gang structure,
162 Rigid frame and cultivating implement
163 Straddle row,
164 Implement adjustment,
165 With adjustable wheel mount
166 Front and rear simultaneously adjusted,

97. PLOWS—Continued.

Cultivators

167 Frame, body, and handle
168 Straddle row,
169 Scraping weeder
170 Straddle row,
171 Lister type,
172 Expansible frames,
173 Crossbeam type
174 Adjustable angle
175 Parallel beams,
176 Center hinged,
177 Rigid V frame,
178 Multiple beam and body,
179 Cultivator attachments.
180 **Guide wheels**
181 Multiple.
182 **Drag-bar units.**
183 **Releasable implement connections**
184 Resilient,
185 Break pin.
186 **Beams.**
187 **Standards.**
188 **Fenders.**
189 **Gauge wheels.**
190 **Gauge runners.**
191 **Handles.**
192 **Plant lifters and deflectors.**
193 **Weed turners.**
194 **Trash clearers.**

Connections

195 Beam and handle,
196 Body and handle,
197 Body and beam,
198 Shovel and standard,
198.1 Beam and tool standard.
199 **Couplings**
200 With implement counterbalance.
201 **Earthworking elements**
202 Cultivator teeth,

97. PLOWS—Continued.

Earthworking elements

203 Cultivator shovels
204 With integral sweep,
205 With separate sweep,
206 Blades
207 Subsurface weeding.
208 Colters
209 Rolling
210 With jointer,
211 Jointer,
212 Rotary elements
213 Chopper head,
214 Chain,
215 Cylinder,
216 With movable teeth,
217 Disk
218 Twin disks,
219 Spirals,
220 Gangs.
221 **Disk sharpeners.**
222 **Tool scrapers**
223 For disks
224 Gangs.
225 **Furrow formers.**
226 **Sod cutters.**
226.1 **Root cutters and grubbers.**
227 **Lawn trimmers.**
228 **Land markers**
229 Wheel supported
230 Machine attached,
231 Slidably mounted.

Implement frames

232 Motor propelled,
233 Wheeled
234 Adjustable,
235 Flexible
236 Break joint,
237 Main and auxiliary,

97. PLOWS—Continued.

Implement frames

238 Nonwheeled
239 Adjustable,

Implement control

240 Adjustment
241 Fore and aft,
242 Lateral,
243 Elevating and depressing
244 Power operated,
245 Swinging.

98 VENTILATION.

1 **Miscellaneous.**
2 **Automobile.**
3 **Locomotive cab.**
4 **Car**
5 Sleeping.
6 Freight
7 Ice-bunker closure,
8 Inlet and outlet
9 Injector and ejector,
10 Air pump
11 Axle operated,
12 Liquid contact,
13 Inlet
14 Air pump
15 Wind-operated motor,
16 Axle operated,
17 Liquid contact,
18 Deflecting separator,
19 Outlet
20 Ejector,
Air pump
21 Wind-operated motor,
22 Axle operated,
Agitating fan
23 Wind-operated motor,
24 Axle operated,
25 Dust guards
26 Inside of window,
27 Outside of window.
28 **Locomotive-cab dust guards.**
29 **Building**
30 Liquid contact,
31 Hollow wall,
32 Inlet and outlet
33 Air pump
34 Wind-operated motor,
35 Cowl,
36 Protecting air current,

98. VENTILATION—Continued.

Building

37 Inlet
38 Air mixers
39 Air pump
40 Air distributer
41 Adjustable valve
42 Outlet
43 Air pump
44 Window wind deflectors
45 Flue heaters
46 Chimney
47 Gas jet or lamp
48 Air entering furnace or chimney
49 **Railway tunnels and subways**
50 **Mines**
51 **Provision safes**
52 **Storage**
53 Grain ships
54 Buildings
55 Grain bins
56 Perforated conduits
57 Inserters
58 **Chimneys**
59 Valved cap
60 Metal
61 **Cowls**
62 Inlet and outlet
63 Wind vane
64 Inlet
65 Wind vane
66 Outlet
67 Brick chimney cap
68 Wind vane
Rotary air pump
69 Rotary wind motor
70 Ejector
71 Wind shield
72 Rotary wind motor
73 Tilting top, wind operated
74 Swinging valves, wind operated

98. VENTILATION—Continued.

Cowls

Outlet
75 Rotary vane-wheel
76 T top
77 Swinging valves, wind operated
78 Ejector
79 Back-draft preventer
80 Spiral
81 Spaced ring
82 Four-side outlets with shield
83 Spaced cap
84 Spaced band
85 Positively actuated valve
86 Fusible release
87 **Door**
88 **Window**
89 Bed or couch
90 Condensation preventers
91 Locomotive cab
92 Car
93 Car
94 Air pump
95 Automatic air valve
96 Pane
97 Sash
98 Top
99 Bottom
99.1 Downward deflecting wall
99.2 Upward deflecting wall
99.3 Swingable or adjustable angle
99.4 With adjustable size or flexible side walls
99.5 Slidably interconnected sections
99.6 Casing
99.7 Slidably interconnected sections
99.8 Shutter, register or grille type
100 Liquid contact

98. VENTILATION—Continued.

101 **Registers**

Floor
102 Single pivoted valve
103 Air distributer
104 With air return vent
105 Air moistener

Wall
106 Inward pivoted valve
107 Pivoted slats
108 Air distributer
109 Air moisteners
110 Pivoted slats
111 Radial
112 Flush surface
113 Rotary operator
114 Boxes, frames, and gratings
115 **Hoods and offtakes**
116 **Combined air pump and air valve**
117 **Wind-motor controlled valve**
118 **Valved thimbles**
119 **Back-draft preventer**
120 **Rotary retarder**
121 **Louvers**
122 **Pipe caps**

99 FOODS AND BEVERAGES

1 **Processes and products**
2 Animal foods
3 Baits
4 Fowl
5 Distillers' residues
6 Molasses
7 Animal derivatives
8 Curing and preserving hay and fodder

99. FOODS AND BEVERAGES—Con.

Processes and products

Animal foods
9 Fermented
10 Hydrolyzed
11 Vitamin
12 Activation
13 Ultra-violet light
14 Protein foods
15 Lecithin
16 Glutamates
17 Vegetable
18 Animal
19 Milk
20 Casein
21 Blood
22 Extracts
23 Chocolate
24 Milk
25 Beverages
26 Cocoa preparation and treatment
27 Malt extracts, foods, and syrups
28 Beverages
29 Fermented or alcoholic
30 Alcoholic type
31 Cereal or malt type
32 Low alcohol
33 Dealcoholized
34 Distilled
35 Wine type
Primary fermentation processes
36 With subsequent and prior operations
37 Including removal of alcohol
38 Including secondary fermentation
39 With subsequent operations

99. FOODS AND BEVERAGES—Con.

Processes and products

Beverages
Fermented or alcoholic
Alcoholic type
Primary fermentation processes
With subsequent operations
40 Including removal of alcohol
41 Including secondary fermentation
42 With prior operations
43 Malt type
44 Primary alcoholic fermentation
45 Treating fermentation products
46 Including removal of alcohol
47 Including secondary fermentation
48 Including aging, stabilizing or purifying
49 Including carbonation
50 Preparing materials
50.5 With hop extraction
51 Including mashing
52 Wort making, purifying, or treating
53 Cereal and malt
54 Milk modification
55 Concentrated
56 Dried
57 Whey
58 Malted
59 Inoculated
60 Treatment
61 Deodorizing
62 Separation of milk fat
63 Artificial and reconstituted
64 Soy

99. FOODS AND BEVERAGES—Con.

Processes and products

Beverages
65 Coffee
66 Tablets
67 Settling compositions
68 Roasting
69 Removing caffein and tannin
70 Volatile solvent
71 Extracts
72 Coffee substitutes
73 Extracts
74 Fruit and vegetable containing mixtures
75 Extracts
76 Tea
77 Extracts
77.1 Tea, coffee, and beverage balls
78 Concentrates
79 Gas charged
80 Cereals
81 Puffing
82 Sudden release of pressure
83 With non-cereal material
84 Filaments, biscuits
85 Macaroni, spaghetti and noodles
86 Baked products
87 Rolls
88 Containers
89 Cones
90 Bread making
91 Improvers, yeast foods, and savers
92 Cake and pastry making
93 Flour and meal
94 Prepared flour
95 Baking powder
96 Yeast
97 Derivatives
98 Legumes
99 Flour

99. FOODS AND BEVERAGES—Con.

Processes and products

100 Fruits and vegetables
101 Butters, etc.
102 Conserved
103 Treatment
104 Dried
105 Juices
106 Enzyme treatment
107 Meat
108 Comminuted
109 Sausage
110 Extracts
111 Sea food
112 Extracts
113 Eggs
114 Substitutes
115 Cheese
116 Preparation
117 Compositions
118 Oils and fats
119 Butter
120 Renovation
121 Modification
122 Butter and lard substitutes
123 With added ingredients
124 Soups
125 Coconut
126 Nuts
127 Salting
128 Butters
129 Jellies
130 Gelatin
131 Vegetable
132 Pectin
133 With extraction
134 Confectionery
135 Chewing gum
136 Frozen
137 Products and structure
138 Products and structure

99. FOODS AND BEVERAGES—Con.

Processes and products

139 Desserts, puddings, and icing
140 Condiments and flavors
141 Saccharous
142 Syrups
143 Salts
144 Relishes and sauces
145 Soy sauce
146 Honey
147 Vinegar
148 Coloring
149 Garbage utilization
150 **Preservation**
151 Milk
152 Coffee
153 Cereals
154 Fruits and vegetables
155 Juices
156 Antiseptic and pickling treatment
157 Meat
158 Sea food
159 Antiseptic and pickling treatment
160 Sea food
161 Eggs
162 Cheese
163 Oils and fats
164 Butter
165 Hermetic sealing
166 Coating
167 Coffee
168 Fruits and vegetables
169 Meat
170 Eggs
171 Packaging, wrapping, and casing
172 Breads and doughs
173 Sliced
174 Meat
175 Sausage
176 Artificial casings

99. FOODS AND BEVERAGES—Con.

Preservation

Hermetic sealing
Packaging, wrapping and casing
177 Eggs
178 Cheese
179 Butter
180 Confectionery
181 Containers, liners
182 Canning
183 Milk
184 With heating and treatment
185 With subsequent heating
186 Fruits and vegetables
187 Meat
188 Sea food
189 Inert gas
190 Packing in liquids and powders
191 Eggs
192 Refrigeration
193 Fruits and vegetables
194 Meat
195 Sea food
196 Eggs
197 Gaseous refrigerant
198 Liquid refrigerant
199 Dehydration
200 Milk
201 Dried
202 Drum
203 Spray
204 Fruits and vegetables
205 Juices
206 Dried
207 Potatoes
208 Meat
209 Sea food
210 Eggs

99. FOODS AND BEVERAGES—Con.

Preservation

211 Sterilization and pasteurization
212 Milk
213 Chemicals, gases
214 In containers
215 Heat
216 Steam
217 Wave energy (non-electrical)
218 Ultra-violet light
219 Shock
220 By metal contact
221 Electric field, current or discharge
222 Antiseptic and pickling compounds
223 Plant origin
224 Acids, esters
225 Fumigation
226 Cyanide
227 Sulphur
228 Oxygen, ozone
229 Smoking
230 Bleaching
231 Nuts
232 Flour
233 Electric current
234 **Apparatus**
235 Animal food
236 Coffee, tea, cocoa
237 Cereal
238 Puffing
238.1 Corn popper type
238.2 Coin control
238.3 Automatic control
238.4 With flavoring
238.5 With feeding, conveying and/or discharging
238.6 Separating discharge
238.7 Combined

99. FOODS AND BEVERAGES—Con.

Apparatus

239 Fruit treating
240 Processors
241 Egg preserving
242 Turners
243 Cheese
244 Oils and fats (butter, margarine, lard)
245 Vinegar
246 Dehydrating
249 Sterilizing and pasteurizing
250 Shock
251 Steam injection
252 Liquids
253 Electric field, current and discharge
254 Pickling
255 Pressure
256 Injecting needle
257 Pump
258 Fumigating
259 Smoking
260 Combined
261 Conveyor
262 Vertical axis
263 Bleaching
264 Emulsifying
265 Homogenizing
266 Rotary
267 With pump
268 Methods
269 Storage receptacle
270 Vacuum
271 Conditioning
272 Vacuum
273 Removal of oxygen
274 Electric

99. FOODS AND BEVERAGES—Con.

Apparatus

275 Beverage
276 Primary-alcoholic fermentations with subsequent and/or prior operations
277 Post-primary-alcoholic fermentation operations
277.1 Aging, refining, and purifying
277.2 With agitating means
278 Hopping, wort-making or ante-primary alcoholic fermentation operations
279 Infusors
280 Automatic control
281 Of heat
282 And infusive contact
283 Of infusive contact
284 Convertible
285 With signal, indicator or observation means
286 With prior handling or treating (e. g., roasting or grinding)
287 With agitating or compacting
288 With cooking or heating means
289 With infusive material feeding and/or discharging
290 Combined
291 Plural infusors
292 Pressure-vacuum or reflux type
293 Steamer or condenser type
294 With additional liquid supply means
295 Cartridge type
296 Invertible type
297 Plunger type
298 Plural bed or filter type

99. FOODS AND BEVERAGES—Con.

Apparatus
Beverage
Infusors
299 With infusive rate or interval control means
300 With liquid supply or directing means
301 Liquid trap
302 Force feed infusor
303 Underfeed
304 Gravity feed infusor
305 With supply regulator
306 Drip chamber type
307 With force feed supply
308 Recycling or repercolating
309 Selective supply
310 Fountain type
311 With overflow
312 With distributor
313 Fountain type
314 With distributor
315 With distributor
316 Plural compartment
317 Inner foraminous receptacle
318 Movable or adjustable
319 Vertical
320 Float
321 Textile type
322 Suspended
323 Infusing receptacles
324 Cooking
325 Automatic control
326 Of heat and material
327 By time
328 And heat responsive means
329 By heat responsive means
330 Of cooking fluid

99. FOODS AND BEVERAGES—Con.

Apparatus
Cooking
Automatic control
331 Of heat or heater
332 By time
333 And heat responsive means
334 Of material
335 By time
336 Egg boiler or deep fat fryer type
337 Intercontrol or safety control
338 Of heat and material
339 Diverse cooker types
340 Convertible
341 With observation means
342 With signal, indicator or tester
343 Gauge or gauge markings
344 Alarm
345 With basting or solid applying means
346 Liquid elevating means
347 Condensing or self basting
348 With stirring
349 With material pressing means (e. g., ham boilers)
350 Band or binder type
351 Spring biased
352 With other treating or handling of material
353 Changing form or shape
354 Ring or hollow article (e. g., doughnut)
355 Subsequent treating or handling
356 Receptacle filling or closing
357 Combined
358 Electrode type
359 Filled receptacle type

99. FOODS AND BEVERAGES—Con.

Apparatus
Cooking
Filled receptacle type
360 With conveyor
361 Successive treating zones or units
362 Single endless conveyor
363 Variable length of path
364 Rollway type
365 Helical
366 Valved receptacle inlet or outlet
367 Plural treating units or zones
368 Fluid interchange
369 With hold-down or presser
370 Plural treating fluids
371 Movable retort or support
372 Opposed heated mold or surface type (e. g., waffle iron)
373 With feeding, conveying and/or discharging
374 Plural units
375 With drip or waste receptor, director or trimmer
376 Detachable or convertible surface
377 Movably supported surfaces
378 Electric feature
379 Adjustable separation
380 Movably connected mold sections
381 Composite article forming or receiving
382 Hollow article forming or receiving
383 Edible container

99. FOODS AND BEVERAGES—Con.

Apparatus
Cooking
Opposed heated mold or surface type (e. g., waffle iron)
Movably connected mold sections
384 Elongate article forming or receiving
385 Slice toaster or broiler (grid types)
386 With conveyer
387 With magazine supply
388 With marking or uniform coloring
389 Opposed heater type
390 Movable or adjustable heater
391 Movable or adjustable carrier or grid
392 Removably guided
393 Movably or adjustably supported carrier or grid
394 Hand-held type
395 With turning feature
396 Interchangeable position type
397 Rotary invertible
398 Displaceable pivot
399 Removably guided
400 With drip or crumb receiving means
401 With heat distributor, baffle or enclosure
402 Hinged or separable grids
403 Boiler or deep fat fryer type
404 With conveyer
405 For buoyant material
406 Fluid current
407 With feeding and/or discharging

99. FOODS AND BEVERAGES—Con.

Apparatus

Cooking

Boiler or deep fat fryer type

408 With crumb or sediment segregating or handling

409 With turning, agitating or inverting

410 Elevated, steaming or draining position

411 Unilaterally supported

412 Bayonet type support

413 Rim engaging support

414 Bail or flexibly suspended

415 Bottom resting support

416 Plural food support

417 Superposed or steaming

418 Bottom resting support

419 Spit or impaling type

420 With conveyer

421 Movably or adjustably supported

422 Imperforate sheet or griddle type

423 With feeding, discharging and/or movably supporting

424 Pivoted section

425 Drip segregating, receiving or directing

426 Confining, conforming or molding support

427 Movably mounted

428 Molds

429 With scraper or separator means

430 With marking, scoring or severing

431 Dipping forms

99. FOODS AND BEVERAGES—Con.

Apparatus

Cooking

Confining, conforming or molding support

Molds

432 Composite article forming

433 With pie rim clamp or guard

434 Pie vents

435 Adjustable size

436 Knockdown, movable or removable section

437 Side break type

438 Liner or insert bottom type

439 Core type

440 For ball or egg shaped article

441 For elongate or sausage shaped article

442 For ring shaped or hollow article

443 With conveyor or movably supported

444 With drip segretating, receiving or directing

445 Channelled gridiron

446 Subjacent receptacle or director

447 With heat distributor

448 Plural food support

449 Collapsible, expansible or sectional support

450 Foraminous support

100 PRESSES.

Baling

Articles and attachments

15 Bale band tighteners

16 Bale ejectors

14 Bales and bale covers

20 Binders

19 Boxes and frames

22 Condensers

23 Discharge-end-contracting devices

24 Division blocks and block inserters

25 Feeders

28 Movable bale boxes

29 Plungers

30 Retainers

1 Belt and roller

Plunger

2 Cam

3 Crank and pitman

4 Lever

5 Rack bar and pinion

6 Ratchet and grapple bar

7 Rebounding

8 Screw

11 Thrust bar

9 Toggle joint

10 Toggle joint, inverted

12 Windlass

13 Screw

65 Traction operated

Bundling

31 In lengths

32 In lengths, shingles

33 Wool

67 Copying

63 Fluid pressure

100. PRESSES—Continued.

Expressing

Articles and attachments

50 Boxes and frames

51 Cake formers

52 Cake strippers

53 Cake trimmers

54 Mats

35 Belt

36 Belt and plunger

37 Belt and roller

38 Disk

Plunger

39 Cam

40 Crank and pitman

41 Lever

42 Rack bar and pinion

43 Ratchet and grapple bar

44 Screw

45 Toggle joint

46 Windlass

47 Roller

48 Screw

49 Without operating mechanism

Packing

55 Cheese

55.5 Hoops and followers

56 Continuous compression

57 Single compression

70 Miscellaneous

71 Hydraulic

101 PRINTING.

1 Miscellaneous
2 Printing and sorting
3 Embossing or penetrating
4 Special-article machines
5 Rolling contact
6 Rotary
7 Rotating object
8 Hot die
9 Hot die
10 Oscillating
11 Feeding or delivering
12 Matrix material
13 Selective machines
14 Drum series
15 Multiple-character bar
16 Die members
17 Processes
18 Selective machines
19 Piercing
20 Oscillating
21 Hot die
22 Rolling-contact machines
23 Rotary
24 Piercing
25 Hot die
26 Piercing machines
27 Hot-die machines
28 Die members
29 Selective
30 Piercing
31 Hot
32 Processes
33 Transferring preparatory designs
34 Processes
35 Special-article machines
36 Rotary
37 Feeding or delivering

101. PRINTING—Continued.

Special-article machines
38 Rotating object
39 Traveling
40 Feeding or delivering
41 Bed and platen
42 Selective
43 Feeding or delivering
44 Feeding or delivering
45 Selective or progressive
46 Typewriter feature
47 Addressing machines
48 Stencil
49 Rotary machines with roller inker and fountain
50 Stencil web
51 Traveling roller inker with fountain
52 Rotary
53 Feeding or delivering
54 Plate chain feed
55 Bed and cylinder
56 Traveling cylinder
57 Bed and platen
58 Article grouper
59 Drum series
60 Interconnected plates
61 Oscillating machine
62 Rotary plate carrier
63 Shifting chase
64 Oscillating machine
65 Oscillating
66 Ticket machines
67 Duplicating
68 Bed and platen
69 Bed and platen
70 Numbering attachment
71 Mail-box machines

Selective or progressive
72 Numbering
73 Measuring machines
74 Rotary
75 Drum series
76 Rotary machines
77 Planetary drum series
78 Bed-and-platen machines
79 Drum series
80 Oscillating machine
81 Roller and plate inker
82 Roller and plate inker
83 Drum series and pad inkers
84 Printing members
85 Drum series
86 Planetary
87 Adjustable
88 Contact actuated
89 Yielding drums
90 Duplicating machines
91 Rotary machines
92 Web
93 Bed-and-platen machines
94 Oscillating
95 Drum series
96 Ribbon inker
97 Pad inker
98 Pad inker
99 Drum series
100 Ribbon inker
101 Pad inker
102 Ribbon inker
103 Printing members and inkers
104 Tumbler bed and pad inker
105 Endless type band
106 Drum series
107 Ribbon inker
108 Pad inker
109 Printing members
110 Drum series

Selective or progressive
Printing members
111 Endless band
112 Stencil plate
113 **Duplicating machines**
114 **Stenciling**
115 Multicolor
116 Rotary machines
117 Cutting and feeding or delivering
118 Feeding or delivering
119 Internal inker
120 Contact member
121 Stencil-web machines
122 Endless band
123 Traveling-inker machines
124 Stationary-inker machines
125 Stencil and pad inker
126 Stencil and work support
127 Stencils
127.1 Mounts, holders and extensions
128 Settable units
128.1 Attaching
128.2 Laminated and/or plural sheets and/or coated base and manufacture
128.3 Including photographic step or surface
128.4 Manufacture
(120) Processes
130 **Planographic**
131 Copying apparatus
131.5 Sheet flexing
132 Rotary
132.5 With dampener
133 Bed-and-cylinder
134 Multicolor ink block
134.5 Bed and platen
135 Multicolor
136 Rotary machines
137 Transfer with interrupter

Planographic
Multicolor
Rotary machines
138 Web
139 Interrupter
140 Interrupter
141 Rotary machines
142 Transfer
143 Web with interrupter
144 Interrupter
145 Interrupter
146 Bed-and-cylinder machines
147 Dampeners
148 Roller fountain
149 Plates, surfaces and processes
149.1 Film to film imbibition
149.2 Elements and making including use
149.3 Including mercury or mercury compounds
149.4 Copying (e. g., hectographic)
149.5 Copying processes (e. g., hectographic)
150 **Intaglio**
151 Multicolor
152 Rotary machines
153 Rotary machines
154 Transfer with scraper wiper
155 Wiper
156 Web
157 Scraper
158 Bed-and-cylinder machines
159 Circulating bed
160 Roller inker with web wiper
161 Roller inker with wiper
162 Web wiper
163 Bed and platen
164 Reciprocating bed with roller inker and web wiper
165 Roller inker with web wiper
166 Web wiper

Intaglio
167 Wipers
168 Web
169 Scraper
170 Processes
171 **Multicolor**
172 Yarn
173 Rotary and bed-and-cylinder machines
174 Rotary machines
175 Single impression
176 Web
177 Transfer
178 Web
179 Perfecting
180 Multiple couple
181 Multiple couple
182 Interrupter
183 Multiple couple
184 Interrupter
185 Interrupter
186 Bed-and-cylinder machines
187 Single impression
188 Lateral shift
189 Multiple cylinder
190 Perfecting
191 Throw-off
192 Interrupter
193 Bed-and-platen machines
194 Single impression
195 Oscillating machines with roller and plate inker
196 Web
197 Oscillating bed
198 Reciprocating bed
199 Roller inker
200 Oscillating
201 Rising-and-falling type
202 Inkers
203 Roller and plate
204 Fountain.

Multicolor
Inkers
205 Roller
206 Rotary machine
207 Fountain
208 Fountain
209 Interrupter
210 Fountains
211 Processes
212 **Rolling-contact machines**
213 Rotary printer and web roll with roller inker
214 Rotary and bed and cylinder
215 Transfer
216 Rotary
217 Transfer
218 Interrupter
219 Web
220 Perfecting
221 Multiple impression
222 Reversing
223 Reversing
224 Cutting and feeding or delivering
225 Feeding or delivering
226 Cutting
227 Feeding or delivering
228 Feeding or delivering
229 Perfecting
230 Reversing
231 Feeding or delivering
232 Feeding or delivering
233 Article-controlled machines
234 Tripped printing member
235 Single revolution
236 Stacking
237 Stacking
238 Stacking
239 Article-timing stop
240 Stacking
241 Article-timing stop

Rolling-contact machines
Rotary
Feeding or delivering
242 Article-timing stop
243 Ribbon inker
244 Ribbon inker
245 Single revolution
246 Gripper cylinder
247 Interrupter
248 Cylinder-registering mechanisms
249 Staggered blanket
250 Bed and cylinder
251 Transfer
252 Traveling cylinder
253 Web
254 Perfecting
255 Circulating bed
256 Traveling cylinder
257 Reversing
258 Oscillating cylinder
259 Circulating bed
260 Traveling cylinder
261 Oscillating cylinder
262 Perfecting
263 Circulating bed
264 Traveling cylinder
265 Stop cylinder
266 Oscillating cylinder with feeding or delivering
267 Feeding or delivering by additional revolution
268 Circulating bed
269 Traveling cylinder
270 Circulating
271 Feeding or delivering with ribbon inker
272 Feeding or delivering
273 Ribbon inker
274 Ribbon inker
275 Stop cylinder
276 Feeding or delivering

Rolling-contact machines
Bed and cylinder
277 Oscillating cylinder
278 Feeding or delivering
279 Feeding or delivering
280 Additional revolution
281 Ribbon inker
282 Bed and cylinder movements only
283 Throw-off
284 Interrupter
285 Interrupter
286 Cylinder - registering mechanisms
287 **Bed-and-platen machines**
288 Web
289 Perfecting
290 Reciprocating bed with roller inker
291 Oscillating bed
292 Reciprocating bed
293 Roller and plate inker
294 Circulating roller
295 Roller inker
296 Perfecting
297 Oscillating
298 Oscillating bed
299 Interrupter
300 Roller and plate inker
301 Inker
302 Roller and plate
303 Traveling plate
304 Circulating roller
305 Roller
306 Interrupter
307 Roller and plate inker
308 Circulating roller
309 Roller inker
310 Inker
311 Roller and plate
312 Traveling plate
313 Circulating roller

Bed-and-platen machines
Oscillating
Inker
314 Roller
315 Fountain
316 Reciprocating bed
317 Interrupter
318 Inker
319 Roller and plate
320 Roller
321 Fountain
322 Interrupter
323 Roller inker
324 Inker
325 Roller and plate
326 Roller with fountain
327 **Printing members and inkers**
328 Rolling-contact printing member
329 Roller inker
330 Fountain
331 Roller fountain
332 Ribbon inker
333 Pad inker
334 Tumbler bed
335 **Inkers**
336 Ribbon
337 Roller and plate
338 Bed-and-platen machines
339 Traveling plate
340 Fountain
341 Interrupter
342 Interrupter
343 Traveling plate
344 Fountain
345 Interrupter
346 Interrupter
347 Fountain

101. PRINTING—Continued.

Inkers

348 Roller
349 Rotary machine
350 Fountain
351 Interrupter
352 Interrupter
353 Bed-and-cylinder machine
354 Traveling roller
355 Fountain
356 Fountain
357 Interrupter
358 Interrupter
359 Bed-and-platen machine
360 Fountain
361 Interrupter
362 Interrupter
363 Fountain
364 Fountains
365 Multiple-point control
366 Force discharge
367 Roller-fountain
368 **Printing members**
369 Addressing plates
370 Type groove
371 Mail-cancelling stamps
372 Special-design forms
373 Arrangeable face
374 Late insertion
375 Rolling contact
376 Yielding surface
377 Type groove
378 Plate securing means
379 Yielding surface
380 Type groove
381 Type groove
382 Plate mountings
383 Securing means
384 Modified plate

101. PRINTING—Continued.

Printing members

Plate mountings
Securing means
385 Detachable hooks
386 Groove
387 Diagonal
388 Shifting means
389 Block
390 Chase-securing means
391 Chases
392 Variable-size frame
393 Adjustable bars
394 Locking means
395 Plates
396 Line bars
397 Special-design face
398 Types
399 Special-design face
400 Rules and borders
401.1 Blanks and processes
401.2 Types or matrices
401.3 Making ready
401.4 Type bars
401.5 Type or matrix forming machines
401.6 Type bar
401 Surfaces
402 Fillers
403 Line spacers
404 Binding
405 Stamp handles
406 Flexible connection
407 **Work-supporting members**
408 Grippers
409 Cylinder
410 Shiftable
411 Gripper-attached tumbler
412 No operating mechanism

101. PRINTING—Continued.

Work supporting members

413 Tympan gages
414 Automatic movement
415 Surface secured
415.1 **Flexible-sheet-securing devices**
416 **Antismut devices**
417 Web
418 Cylinder-carried reels
419 Sheet
420 Contact preventers
421 Friskets
422 Ink repellent
423 Cleaners
424 With cleaning composition
425 **Cleaning attachments**
426 **Processes**

102 AMMUNITION AND EXPLOSIVE DEVICES

1 **Miscellaneous**
2 **Drop bombs**
3 With direction controlling means
4 With drop retarding means
5 With laterally directed barrels
6 Gas, incendiary or smoke
7 Marine type
7.2 Rebounding, having separable section and/or multiple bursting charges
7.4 With target contact anticipator
7.6 Practice or "dummy"
8 **Mines**
9 Aerial type
10 Marine type
11 Fields or groups
12 With manipulating means
13 Laying, anchoring or manipulating
14 Depth regulation by hydrostatic pressure
15 Anti-sweep anchorages
16 Firing devices
17 Contact type
18 Magnetic and/or vibration or other wave energy responsive
19 With overland propulsion means
19.2 With igniter utilizing, electrical, magnetic, wave or radiant energy
20 **Well torpedoes**
21 Methods
21.2 With lowering cable cutting, and/or releasing means
21.4 With tamping means
21.6 With plural explosive charges, with gas and/or with non-explosive liquid
21.8 With anchoring means and/or with well wall contacting guides or buffers
22 **Blasting**
23 Methods
24 Cartridges

102. AMMUNITION AND EXPLOSIVE DEVICES—Continued.

Blasting
Cartridges
25 Safety type
26 With plugs
27 Fuses
28 Electric
29 Caps
30 Plugs
31 **Pyrotechnics**
32 Cartridges
33 Firecrackers
34 Rockets
34.1 With vanes, wings, parachute or balloon
34.2 With stick or support
34.3 With means to rotate by gas discharge
34.4 With means to eject article or charge from casing
34.5 With plural, successively ignited charges
35 Parachute flares
35.2 Multiple flare
35.4 Multiple and/or vane type parachutes, and/or means to restrain complete initial parachute opening
35.6 With means to eject parachute and/or flare from casing
37 Toy torpedoes
37.1 With vanes, wings, parachute, balloon or propeller
37.2 Simulations
37.3 Combined
37.4 With holder or support
37.5 Wheels, rotors or whirlers
37.52 Spike form
37.6 With means to eject article or charge from casing
37.7 With plural, successively ignited charges
37.8 Torches

102. AMMUNITION AND EXPLOSIVE DEVICES—Continued.

38 **Cartridges**
39 Blank, noxious gas containing or generating, or with bore cleaning member
40 With divided propelling charge
41 Practice or captive projectile type
42 Shot
43 Cases
44 Breech structure
45 With primer devices
46 Electric
48 **Bomb lances**
49 **With propelling charge**
50 **With stability producing or trajectory affecting means**
51 Self rotating
52 **Armor piercing**
53 **Non-ricocheting**
54 **Marine type**
55 **Oil distributing**
56 **Shells**
57 With means to form a bursting charge after projection
58 With divided bursting charge
59 With bursting charge cushioning means
60 With tracing or illuminating means
61 With laterally directed barrels
62 With extendable arms
63 Line carrying or filamentary material distributing
64 Grenades
65 Gas, incendiary or smoke
65.2 With gun or other projector engaging or cooperating means
65.4 With throwing handle, handgrip or strand
66 Gas, incendiary or smoke
67 Shrapnel
68 Explosive
69 Plural shells
87 **With tracing or illuminating means**
88 **With extendable arms**

102. AMMUNITION AND EXPLOSIVE DEVICES—Continued.

89 **Line carrying or filamentary material distributing**
90 **Gas, incendiary or smoke**
91 **Dumdum and compound projectile**
92 **Lubricating or narcotizing material containing**
92.5 **Projectiles**
70 **Fuses, primers and igniting devices**
70.2 Utilizing electrical, magnetic, wave or radiant energy
71 Combined time controlled and operated by impact on objective
72 Powder train type
73 Operated by impact on objective
74 Combined delay and instantaneous
75 Delay type
76 With arming means
77 Shear element
78 Inertia type
79 Centrifugal type
80 With inertia type release means
81 Vane or fluid pressure operated
81.2 Rotary vane
81.6 Manually released
82 Time controlled
83 Mechanical
84 Clock work type
85 Powder train
85.2 With train length selecting means
85.6 With relatively movable striker or igniter
86 Vane operated
86.2 Strand and/or dropped weight operated
86.5 Primers
93 **Sabots and rifling bands**
94 Wedge expanded
95 **Wads**
97 **Powder bags**
98 **Powder forms**

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103 PUMPS

1 **Miscellaneous.**
2 **Multiple suction or discharge.**
3 **Reversible flow.**
4 **Combined types**
5 Series.
6 **Multiple fluids**
7 Single pump
8 Cooperating piston,
9 Separate pulsation chambers.
10 **Convertible types.**
11 **Regulators**
12 Combined controlling devices,
13 Throttle valve
14 Float,
15 Thermostatic,
16 Expansible-chamber operated
17 Valve controlled
18 Float,
19 Multiple fluid pressure
20 Valve controlled,
21 Flow controlled,
22 Starting and stopping devices
23 Connectors and disconnectors
24 Belt shifter,
25 Electric motor
26 Float controlled,
27 Explosive engine,
28 Float
29 Reciprocating rack,
30 Curved rack,
31 Gravity vessel
32 Float controlled,
33 Expansible-chamber operated
34 Float controlled,
35 Speed control
36 Overflow to motor,
37 Variable capacity
38 Stroke regulators,

103. PUMPS—Continued.

Regulators
39 Load distribution
40 Check-valve controller,
41 By-pass
42 Pressure operated.
43 **With motor**
44 Fluid transmission
45 Pump and motor circuit,
46 Drilled-well type,
47 Reciprocating motor
48 Direct connected
49 Multiple units,
50 Single-acting plunger
51 Double plunger,
52 Common piston,
53 Electric motor,
54 Explosive motor,
55 Gravity vessel,
56 Buoyant motor,
57 Rotary motor,
58 Current motor
59 Rotary
60 Water wheel
61 Water bucket attached,
62 Endless-chain pump,
63 Endless chain,
64 Tide or wave motor
65 Vane or bucket
66 Oscillating,
67 Rotary,
68 Float
69 Pivoted,
70 Vertically guided,
71 Weight.
72 **Endless chain**
73 Piston type
74 Pistons.
75 **Momentum-liquid piston**
76 Vibrating tube,

103. PUMPS—Continued.

Momentum-liquid piston
77 Hydraulic rams
78 Multiple drive pipes,
79 With pump.
80 **Paddle.**
81 **Rocking channel.**
82 **Scoop.**
83 **Rotary**
84 Viscosity type,
85 Dipping channel
86 Helicoidal,
87 With motor,
88 Screw and centrifugal,
89 Screw
90 Drilled-well type,
91 Rotary casing,
92 Multiple impellers
93 Series,
94 Reversely rotating,
95 Centripetal,
96 Centrifugal
97 Regulators,
98 With turbo diffuser,
99 Tube type
100 Radiating channels,
101 Bowl type,
102 Drilled-well type,
103 Center intake
104 Opposed intakes,
105 Multiple impellers
106 Convertible,
107 Parallel,
108 Series
109 Opposed intakes,
110 Concentric,
111 Elements
112 Balancing devices,
113 Priming and venting devices.
114 Liners and materials,

103. PUMPS—Continued.

Rotary
Centrifugal
Elements
115 Impellers.
116 **Expansible chamber**
117 Rotary
118 With motor,
119 Drilled-well type,
120 Variable capacity,
121 Rotary cylinder,
122 Movable abutment
123 Reciprocating,
124 Oscillating,
125 Rotary,
126 Interengaging impellers
127 Beveled,
128 Helical,
129 Alternating pistons,
130 Planetary piston
131 Nonrotating
132 Movable abutment,
133 Nutating axis,
134 Movable vane
135 Reciprocating
136 Radial
137 Diametrically cooperating
138 Intersecting,
139 Axially moving,
140 Oscillating
141 Radial pivot
142 Axial,
143 Rotary,
144 Stationary pivot,
145 Oscillating piston
146 Valved piston,
147 With motor,
148 Collapsible chamber
149 Rotary compress,

103. PUMPS—Continued.

Expansible chamber
Collapsible chamber
150 Diaphragm
151 Valved,
152 With motor,
153 Reciprocating piston
154 Fuel-feeder types,
155 Drilled-well type
156 Double acting,
157 Axially rotating,
158 Movable cylinder
159 Oscillating,
160 Rotary
161 Multiple cylinders
162 Parallel,
163 Flow controlling,
164 Fluid transmission
165 Liquid,
166 Opposing pistons,
167 Successive pistons
168 Differential pistons,
169 Multiple cylinders
170 Duplex,
171 Aligned
172 Center inlet and delivery,
173 Annularly disposed,
174 Radiating,
175 Double acting
176 Multiple cylinders
177 Parallel,
178 Valved piston
179 Drilled-well type
180 Valve puller,
181 Removable barrel,
182 Multiple cylinders
183 Duplex,
184 Aligned cylinders
185 Center supply,
186 Center delivery,

103. PUMPS—Continued.

Expansible chamber
Reciprocating piston
Valved piston
Multiple cylinders
187 Solid piston combined,
188 Hollow piston rod
189 Valved piston combined,
190 Solid piston combined,
191 Multiple cylinders,
192 Double-acting piston
193 Hollow suction rod,
194 Successive pistons
195 Combined solid piston
196 Hollow piston rod,
197 Reversed valves,
198 Oppositely moving
199 Reversed valves,
200 Aligned,
201 Solid piston combined.
202 **Elements**
203 Priming and venting,
204 Agitating, flushing, and fluid packing,
205 Operating devices
206 Power and load equalizers,
207 Multiple actuators,
208 Animal or vehicle,
209 Vehicle and cable,
210 Quick return,
211 Spring or weight,
212 Flexible transmission,
213 Cams and eccentrics,
214 Rack and pinion,
215 Oscillating lever,
216 Cylinders, liners, and materials,
217 Stocks and casings,
218 Supports
219 Tube-well types,
220 Sand traps and strainers,

103. PUMPS—Continued.

Elements
221 Drain devices,
222 Accumulators,
223 Cushioning devices
224 Air and vacuum chambers,
225 Valved pistons,
226 Releasable piston-rod and cable couplings,
227 Valve actuation,
228 Valves
229 Standing,
230 Multiple.
231 **Pneumatic displacement and air jet.**
232 **Aerated column**
233 Series.
234 **Pneumatic displacement**
235 Vacuum and pressure,
236 Vacuum,
237 Hydraulic compression,
238 Multiple chambers
239 Series.
240 Automatic valve actuation
241 Electric motor,
242 Gravity vessel
243 Movable pump chamber,
244 Rotary motor,
245 Reciprocating motor
246 Float controlled,
247 Mechanically controlled,
248 Float.
249 **Combustion**
250 Momentum liquid piston,
251 Vacuum.
252 **Steam and vacuum**
253 Boiler feeders,
254 Steam loop,
255 With generator,
256 Multiple chambers
257 Duplex.

103. PUMPS—Continued.

258 **Jet**
259 Combined types,
260 Well or vertical-lift type
261 Successive jets,
262 Hydraulic jet,
263 Pneumatic jet,
264 Steam jet
265 Live and exhaust steam,
266 Plural jets
267 Successive
268 With manual valve control,
269 With manual valve control,
270 With manual valve control,
271 Regulators
272 For nozzles,
273 For combining tubes
274 Pressure controlled,
275 Pressure-controlled overflow,
276 Float controlled,
277 Elements
278 Nozzles.

104 RAILWAYS.

1 **Miscellaneous.**
2 **Track layers**
3 Built-up sections,
4 Portable shifter,
5 Distributers
6 Transverse-tie placer,
7 Track raiser,
8 Sluer,
9 Tie replacer,
10 Tamper
11 Pneumatic injector,
12 Car mounted,
13 Hand tools
14 Pneumatic,
15 Joint welders,
16 Tie platers,
17 Spike drivers.
18 **Moving train**
19 Safety lander,
20 Passenger transfer
21 Revolving terminal.
22 **Balloon.**
23 **Airplane.**
24 **Sailing devices.**
25 **Endless train.**
26 **Car yards.**
27 **Terminals and stations**
28 Passenger,
29 Freight,
30 Platforms
31 Shifting.
32 **Truck changers**
33 Wheel-gauge changers.
34 **Vehicle-battery replacer.**
35 **Turntables**
36 Actuators
37 Fluid pressure,
38 Electric control,

104. RAILWAYS—Continued.

Turntables
Actuators
39 Traction cable,
40 Vehicle operated
41 Drive wheel,
42 Gravity,
43 Traction wheel,
44 Automobile,
45 Portable,
46 Bearings and pivots,
47 Locks.
48 **Transfer tables**
49 Swinging,
50 Operating mechanism.
51 **Locomotive-shed fixtures**
52 Smoke jacks.
53 **Amusement**
54 Gap jumpers,
55 Loop,
56 Helical
57 Rotating,
58 Moving-wave track
59 Drifting tub,
60 Racing,
61 Horse simulation,
62 Physical training,
63 Tortuous alinement
64 Horizontal zigzag
65 Exchanging gears,
66 Chain drive,
67 Switchback,
68 Bowl, cylinder, or globe,
69 Chutes
70 Water dive,
71 Submarines,
72 Splasher,
73 Canals,
74 Rotary car on truck
75 Vertical axis,

104. RAILWAYS—Continued.

Amusement
Rotary car on truck
76 Horizontal axis,
77 Car in wheel
78 Traveling,
79 Seesaw track,
80 Seesaw car drive,
81 Swing car drive,
82 Passenger jumper,
83 Illusion vehicles,
84 Optical illusion,
85 Physical illusion,
86 Hydraulic effects.
87 **Cable and rigid combined.**
88 **Selective delivery.**
89 **Suspended**
90 Ferry,
91 Track systems,
92 Swing boom track,
93 Single-rail type,
94 Double inner rail,
95 Double outer rail.
96 **Trolley transfer**
97 Beef-jack type,
98 Overhead crane,
99 Turntable type,
100 Horizontal end pivot,
101 Longitudinal pivot,
102 Sliding shift,
103 Swing stub,
104 Split point,
105 Rigid frog.
106 **Trolley rails**
107 Two tread
108 Slotted tube,
109 Integral,
110 Single tread,
111 Hangers.

104. RAILWAYS—Continued.

112 **Cable rails**
113 Gravity,
114 Extensible marine,
115 Hangers and saddles
116 Vertical movement,
117 Tension regulators and anchors.
118 **Monorail**
119 With side guides,
120 Raised center rail,
121 Single top guide.
122 **Drop pick up.**
123 **Way suspension.**
124 **Elevated structure.**
125 **Posts and towers.**
126 **Portable elevated.**
127 **Elevators**
128 Car,
129 Track control.
130 **Switches**
131 Vertical,
132 Rack rail.
133 **Droppings catcher.**
134 **Sledways**
135 Roller track,
136 Ice track,
137 **Traveling track.**
138 **Tubular ways.**
139 **Truck in conduit.**
140 **Slotted conduit**
141 Crossings,
142 Yokes
143 Concrete,
144 Integral metallic,
145 Grip or plow traps,
146 Adjustable slots.
147 **Car-propulsion systems**
148 Electric
149 External car control
150 Auxiliary function,

104. RAILWAYS—Continued.

Car-propulsion systems
Electric
External car control
151 Reversing devices,
152 Speed regulators,
153 Block system,
154 Hydraulic,
155 Pneumatic
156 Piston tube,
157 Motor charging
158 Moving car
159 Longitudinal supply tube
160 Sliding-sleeve receiver,
161 Sealing slot closers,
162 Pusher
163 Rotary.
164 Tilting track.
165 **Traction**
166 Longitudinal rotary shafts,
167 Helical,
168 Transverse live roll,
169 Reciprocating farm tool,
170 Truck distribution
171 Two-wheel type,
172 Chain,
173 Cables
174 Counterbalanced system
175 Weight,
176 Mule car,
177 Mail,
178 Drive and control
179 Signals,
180 Running and carrying cable
181 Mail,
182 Clearing-way hangers,
183 Drum-wind draft,
184 At switches,
185 Crossing conduit
186 Cable depressors,

104. RAILWAYS—Continued.

Traction
Cables
Crossing conduit
187 Auxiliary car propulsion,
188 At swing bridges,
189 Curves
190 Auxiliary car propulsion,
191 Horizontal pulley,
192 Double-rope system,
193 Draft-cable coupling,
194 Slot closers,
195 Slot switches,
196 Take-ups,
197 Supporting pulley,
198 Cable shifters,
199 Cable lifters,
200 Cable clips
201 Strand engaging,
202 Grippers
203 Pneumatically operated,
204 Automatic grip control
205 Trip lever
206 Toggle-operated jaw,
207 Releasable pawl,
208 Weight-operated jaw,
209 Spring-pressed jaw,
210 Screw operated,
211 Cam operated,
212 Wedge operated,
213 Longitudinal buffer,
214 Laterally movable jaws
215 With guide rollers,
216 Pivoted and fixed jaws,
217 Forceps,
218 Vertically movable jaws
219 Pawl lever and link,
220 With guide rollers
221 Pawl lever and link,
222 Wedge,

104. RAILWAYS—Continued.

Traction
Cables
Grippers
223 Screw,
224 Cam,
225 V clips or hooks,
226 Friction belt,
227 Overstepping
228 Revolving,
229 Rollers
230 Power transmitting,
231 Laterally movable,
232 Vertically movable
233 Opposing twin,
234 Staggered,
235 Whelp wheel,
236 Sprocket wheel,
237 Sprocket belt,
238 Drive stops on car,
239 Cable-driving stops,
240 Cable construction.
241 **Seat-guard control.**
242 **Derailment guards**
243 Supplemental car wheels and rails,
244 Inclined wheels.
245 Guide rollers
246 Rail interlock,
247 Horizontal thrust only,
248 Rail-interlocking lugs.
249 **Car stops**
250 Special track
251 Car retaining,
252 Releasable feed
253 Alternate,
254 Bumpers
255 Counterweight,
256 Fluid pressure,
257 Displaceable chock,
258 Rail-clamp chocks,

104. RAILWAYS—Continued.

Car stops
259 Sliding,
260 Wheel skid.
261 **Car-attached derailer.**
262 **Car replacer**
263 Car attached,
264 Special track,
265 Two way
266 With rollers,
267 Double
268 One way
269 Symmetrical,
270 Saddles,
271 Pivoted ramp,
272 Articulated extension,
273 Shifting jack,
274 Rail clamps.
275 **Hose bridges**
276 Overhead,
277 Under rail.
278 **Driftage control.**
279 **Track clearers**
280 Conduit.

105 RAILWAY ROLLING STOCK.

1 **Trains**
2 Stream-line form,
3 Articulated
4 Two-car truck,
5 Nontelescoping
6 Bevel ended,
7 One-track passage,
8 Vestibule connections
9 Cab and tender,
10 Face-plate expanders
11 Pneumatic,
12 Gravity,
13 Vertical equalizing,
14 Top bow spring,
15 Diaphragms
16 Metallic
17 Telescopic,
18 Bellows fold
19 Slit plaits,
20 Fasteners,
21 Face plates
22 Vertical hanger rod,
23 Curtain releasers
24 Trip handles,
25 Twin jaws.
26 **Locomotives**
27 Auxiliary function,
28 Turntables,
29 Rack rail,
30 Gripping drivers,
31 Track pusher,
32 Intermittent grip,
33 Driver pick-up,
34 Bogie on car,
35 Generating electric
36 Turbine,
37 Steam
38 Turbine,

105. RAILWAY ROLLING STOCK—Continued.

Locomotives
Steam
39 Compound,
40 Articulated boilers,
41 Center fire-box twin,
42 Transverse cylinder,
43 Boilers
44 Saddles,
45 Superheaters,
46 Fire-box arrangement,
47 Articulated pipes,
48 Control,
49 Electric
50 Battery
51 Cell disposal,
52 Double rotor,
53 Wheel rotor,
54 Rotor on axle
55 Geared,
56 Plane field,
57 Balanced cylindrical field,
58 Twin fields,
59 Motor coolers,
60 Insulation,
61 Control,
62 Explosive engines,
63 Pneumatic
64 Pump and motor,
65 Storage,
66 Propeller,
67 Spring
68 Elliptic,
69 Coil,
70 Torsion,
71 Spiral,
72 Gravity,
73 Traction regulators
74 Airplane,

105. RAILWAY ROLLING STOCK—Continued.

Locomotives
Traction regulators
75 Variable driver load,
76 Electric,
77 Electromagnetic
78 Wheel or axle,
79 Inside drive boxes
80 Lateral motion,
81 Wedge adjustment,
82 Equalizers,
84 Connecting rods,
85 Drive-wheel turners.
86 **Trackman's-car drive**
87 Vertical hand lever,
88 Horizontal hand lever,
89 Hand crank
90 Car pusher,
91 Pedal crank
92 On axle,
93 Treadle,
94 Rockable seat,
95 Bicycle conversion.
96 **Wheel or axle drive**
96.1 Axle box mounted transmission,
96.2 Fluid transmission,
97 Planetary,
98 Tandem drive,
99 Articulated radial,
100 Epicyclic drive wheels,
101 Belt gear
102 To rotor
103 Double loop,
104 To crank shaft,
105 Belt tightener
106 Swinging motor,
107 Sliding motor,
108 Plane gear
109 To bevel gear,

105. RAILWAY ROLLING STOCK—Continued.

Wheel or axle drive
Plane gear
110 To belt,
111 To pitman and rotor,
112 Engaging traction wheel,
113 To rotor
114 Engaging traction wheel,
115 With crank shaft
116 Engaging traction wheel,
117 Bevel gear
118 To rotor,
119 Worm gear,
120 Pitman to jack shaft
121 Geared,
122 Pitman to rotor,
123 Pitman to lever,
124 Pawl and ratchet
125 Pawl on axle bracket
126 Winding drum,
127 Rack and pinion,
128 One-way friction grip,
129 Flange or axle grip tool,
130 Clutches,
131 Resilient drive,
132 Loose link,
132.1 Torque arms.
133 Motor placement
134 Cable grip,
135 Opposing torque equalizer,
136 Axle mounting
137 Stator casings,
138 Bar supports
139 With springs,
140 Boxings and casings.
141 Monorail
142 Human balance,
143 Animal draft,
144 With side guides

105. RAILWAY ROLLING STOCK—Continued.

Monorail
With side guides
145 Raised center rail,
146 Overhead guides,
147 Single top guide.
148 Suspended
149 Car leveler,
150 Single rail
151 Cable retainers,
152 Equalized trolleys,
153 Under rolls,
154 Inner wheels,
155 Outer wheels,
156 Vertical swivels.
157 Trucks
158 Modified car,
159 Vehicle carrying,
160 Bunk,
160.5 Lumber,
161 Mining machine,
162 Trackman's car,
163 Overhead cranes,
164 Levelers,
165 Radial
166 Six-wheel,
167 Bogie
168 Positive control,
169 Stub axle,
170 Caster-wheel type,
171 Lateral motion,
172 Locomotive frames
173 Buffer beams,
174 Swinging bogie,
175 Articulated,
176 Interconnected,
177 Multidirectional,
178 Changeable gage,
179 Vertical side pivot,

105. RAILWAY ROLLING STOCK—Continued.

Trucks
180 Stub axle,
181 Antifriction wheels,
182 Bogie
183 Eight-wheel,
184 Maximum traction,
185 Lateral-motion bolster
186 Roller,
187 Rocker,
188 Six wheel,
189 Center plate,
190 Swinging
191 On column guide,
192 Span supported,
193 Bolster damper,
194 Equalizers
195 Six-wheel,
196 Six-wheel,
197 Spring bolster
197.1 Leaf and coil,
197.2 Spring plankless,
198 Rocking,
199 Body connections,
200 Bolster connections
201 Lateral motion,
202 Combined transom and bolster
203 Rocking,
204 Arch-bar type
205 Integral,
206 Side frames,
207 Bolster guides,
208 Spring planks and transoms
208.1 Resiliently mounted transoms,
208.2 Vertically flexible spring plank or loose connections,
209 Equalizers,
210 Parallel depression,

105. RAILWAY ROLLING STOCK—Continued.

Trucks
211 Platform
212 Spring
213 Side-frame base
214 Integral U yoke,
215 Supplemental wheels,
216 Supplemental skids,
217 Safety supports,
218 Axle-box mounting
219 Permanent fixture,
220 Detachable fixture,
221 Releasable incloser,
222 Longitudinally movable,
223 Rocking,
224 Springs and guides,
224.1 Deformable cushions.
225 Wear plates,
226 Bolsters
227 Double,
228 Center-sill connection,
229 Trussed,
230 Cast.
231 Tender
232 Coal feed
233 Reciprocatory plunger,
234 Screw,
235 Tilting pan,
236 Tanks,
237 Coal bin.
238 Special car bodies
239 Dumping
240 Motor-operated doors,
241 Moving-car dump,
242 Suspended,
243 Convertible flat and hopper bottom,
244 Gondola drop bottom
245 Central ridge,

105. RAILWAY ROLLING STOCK—Continued.

Special car bodies

Dumping
- Gondola drop bottom
  - 246 Rising ridge,
  - 247 Hopper type
  - 248 Multiple hopper
    - 249 Facing center chute,
  - 250 Longitudinal doors
    - 251 Center-sill separator,
    - 252 Side-chute bridge,
  - 253 Transverse doors,
- 254 Inclined bottom
  - 255 Opposite doors,
  - 256 Side-spout gondola,
  - 257 Shifting,
- 258 Side-door gondola
  - 259 Plow car,
- 260 Coupled side and bottom,
- 261 Tilting body
  - 262 Inwardly dumping section,
  - 263 Outwardly dumping section,
  - 264 Rolling tilt
    - 265 With motor,
    - 266 Worm gear,
    - 267 Screw,
  - 268 Cam-track tilt,
  - 269 Slide and tilt,
  - 270 Pivoted
    - 271 With motor,
    - 272 Off center
      - 273 Power hoist,
      - 274 One-side dump
        - 275 Horizontal rotary,
  - 276 Displaceable sides
    - 277 Bodily movable,
  - 278 Body prop and tie,
  - 279 Aprons and baffles,

105. RAILWAY ROLLING STOCK—Continued.

Special car bodies

Dumping
- 280 Doors
  - 281 Interchangeable hinge,
  - 282 Sliding,
  - 283 Offset pivot,
  - 284 Link swing,
  - 285 Buffers,
- 286 Door actuators
  - 287 Serial and selective,
  - 288 Multiple door
    - 289 Interconnected
      - 290 Links
        - 291 With hook,
      - 292 Chains,
  - 293 Creeping shaft
    - 294 Rack and pinion,
    - 295 Chain wind,
  - 296 Crank shaft
    - 297 Creeping,
    - 298 U-crank,
  - 299 Crank and link,
  - 300 Chain winder
    - 301 Creeping-shaft lock,
    - 302 Tension lock shifter,
    - 303 Terminal hook,
  - 304 Toggle or strut,
  - 305 Rack and pinion,
  - 306 Lever or chain,
  - 307 Screw or worm,
- 308 Door lock
  - 309 Shifting-shaft,
  - 310 Door actuator operated,
- 311 Control
  - 312 Ratchet handle,
  - 313 Shaft lock,
- 314 Sleeping
  - 315 Arrangement,

105. RAILWAY ROLLING STOCK—Continued.

Special car bodies

Sleeping
- 316 Berths
  - 317 Vertically movable
    - 318 With hoist,
  - 319 Collapsible,
  - 320 Hammock type,
  - 321 Hinged,
  - 322 Seat back and upper,
- 323 Partitions,
- 324 Curtains and rods,
- 325 Article holders,
- 326 Ladders and steps,
- 327 Dining,
- 328 Merchandizing,
- 329 Passenger
  - 330 Rolling,
  - 331 Combined open and closed,
  - 332 Converticle open and closed
    - 333 Vertical sliding panel
      - 334 Roof storage,
      - 335 Drop storage,
    - 336 Seat-back panel,
    - 337 Removable sides,
    - 338 Removable panels,
    - 339 Spaced sliding doors,
  - 340 Double deck,
  - 341 Entrance and exit control
    - 341.5 Turnstile,
  - 342 Motorman's compartment,
  - 343 Door arrangement,
  - 344 Passenger placement
    - 345 Seats
      - 346 Open car
        - 347 End panels,
  - 348 Emergency exits
    - 349 Automatic,

105. RAILWAY ROLLING STOCK—Continued.

Special car bodies

Passenger
- 350 Dust guards
  - 351 Car bottom
    - 352 With collector,
  - 353 Storm fronts,
  - 354 Hand straps,
- 355 Freight
  - 356 Rolling,
  - 357 Vacuum wall,
  - 358 Tank
    - 359 Combined freight,
    - 360 Tank form,
    - 361 Longitudinally slidable,
    - 362 Saddle and anchors,
  - 363 Knockdown body,
  - 364 Mine,
  - 365 Tubular way,
  - 366 Removable units,
  - 367 Special article
    - 368 Automobile,
  - 369 Load braces,
  - 370 Convertible deck
    - 371 Sectional
      - 372 Side hinge,
  - 373 Tiered crates and slides,
  - 374 Interior end buffers,
  - 375 Auxiliary floors,
  - 376 Partitions,
  - 377 Removable covers,
  - 378 Movable side sections,
  - 379 Extension side walls,
  - 380 Stakes
    - 381 Side folding
    - 382 Releasable
      - 383 Pocket openers
      - 384 Direct detent,
      - 385 Horizontal slide,

105. RAILWAY ROLLING STOCK—Continued.

Special car bodies
Freight
Stakes
Releasable
386 Vertical slide,
387 Collapsible,
388 Chain release,
389 Telescopic,
390 Pockets
391 Folding,
392 Freight-contacting rollers.
392.5 Shock absorbing,
393 Expansible,
394 Armored and protected,
395 Automatic door lock.
396 **Car framing and structure**
397 Passenger
398 Depressed side door,
399 Truss,
400 Continuous rib,
401 Metal sheathing,
402 Ends
403 Cast,
404 Freight
405 Concrete,
406 Gondola,
407 Truss,
408 Timber pockets,
409 Metal sheathing
410 Ends,
411 Braces,
412 Shrinkage take-ups,
413 Underframes
414 Metallic
415 Cast,
416 Mono-center-sill type,
417 Spread-center-sill type,
418 Longitudinal sills,
419 Cross bearers,

105. RAILWAY ROLLING STOCK—Continued.

Car framing and structure
420 Draft-sill framing,
421 End sills.
422 **Floors.**
423 **Linings.**
424 **Antileak joints.**
425 **Platforms**
426 Trapdoors
427 Operated with gate and step,
428 Diagonal sectional,
429 With gate,
430 With steps
431 Convertible,
432 Actuators
433 Lateral shifter,
434 Spring,
435 Locks and starters,
436 Side gangway.
437 **Steps with gate**
438 Convertible.
439 **Side guards**
440 Single passage
441 Seat shifter,
442 Long drop bar.
443 **Steps**
444 Electric control,
445 Pneumatic control,
446 Car-movement control,
447 Folding
448 Z-fold riser,
449 Slidable,
450 Cover.
451 **Heating devices.**
452 **Sound deadeners.**
453 **Body suspension and springs.**
454 **Longitudinally movable body.**
455 **Horizontal rotary.**
456 **Cabs.**

105. RAILWAY ROLLING STOCK—Continued.

457 **Running boards and rails.**
458 **Safety bridges**
459 Locomotive and tender.
460 **End footboards.**
461 **Grab irons.**
462 **Poling, roping, and jacking irons.**

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106 COMPOSITIONS, COATING OR PLASTIC

Coating or plastic compositions

1 Metal depositing,
2 Coating repellant,
3 Polishes
4 Protein or derivative containing,
5 Carbohydrate or derivative containing,
6 Natural resin or derivative containing
7 With fatty oil,
8 Fat, fatty oil, fatty oil acid or salt thereof containing
9 Fatty oil,
10 Wax, bituminous material or tarry residue containing,
11 Hydrocarbon containing,
12 Saturating or indurating,
13 Fog, frost or ice preventive,
14 Corrosion inhibiting,
15 With fire proofing, biocidal, or anti-fouling agent
16 Natural resin or derivative containing
17 With fat; fatty oil, fatty oil acid or salt thereof,
18 Fat, fatty oil, fatty oil acid or salt thereof containing,
19 Marking
20 Inks
21 Invisible,
22 Organic dye containing
23 With pigment,
24 Protein or derivative containing,
25 Carbohydrate or derivative containing
26 Cellulose or derivative,
27 Fat, fatty oil, fatty oil acid or salt thereof containing

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Marking
Inks
Fat, fatty oil, fatty oil acid or salt thereof containing
28 Fatty oil
29 With natural resin or derivative
30 Natural resin or derivative containing,
31 Wax, bituminous material or tarry residue containing,
32 Hydrocarbon containing,
33 Leak stopping,
34 Stains,
35 Dental,
36 Tractive or friction surface,
37 Sound recording,
38 Shoe filling,
39 Ceramic
40 Pore forming
41 By use of organic combustible material,
42 Synthetic precious stones,
43 Carbide containing
44 Silicon carbide,
45 Porcelain or earthenware
46 Electrical insulating type,
47 Glass
48 Enamel
49 Lead containing,
50 Fibrous,
51 Slag,
52 Silica containing
53 Lead containing,
54 Boro-silicate,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Ceramic
55 Refractory
56 Elemental carbon containing
57 Zirconium compound containing,
58 Magnesium compound containing
59 With chromium compound,
60 With iron compound
61 Dolomite containing,
62 With aluminum compound,
63 Alkali earth metal compound containing
64 Hydraulic cement containing,
65 Trivalent metal compound containing
66 Chromium,
67 Clay
68 Silica-clay mixtures,
69 Silica containing,
70 Sulfur containing,
71 Clay containing
72 Treatment,
73 With alkali forming metal compound,
74 Alkali metal silicate containing
75 Pore forming,
76 With Portland type cement,
77 With calcium sulfate,
78 With lime,
79 With protein or derivative,
80 With carbohydrate or derivative
81 Cellulose or derivative,
82 With fat, fatty oil, fatty oil acid or salt thereof,
83 With wax, bituminous or resinous material or tarry residues,
84 With filler, dye or pigment,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

85 Inorganic settable ingredient containing
86 Pore forming
87 Gas-evolving agent,
88 Gas introduction,
89 Portland type cement
90 With organic material
91 Protein or derivative,
92 Carbohydrate or derivative
93 Cellulose or derivative
94 Natural resin or derivative,
95 Fat, fatty oil, fatty oil acid or salt thereof,
96 Wax, bituminous material or tarry residue,
97 With filler, aggregate or pigment
98 Silica,
99 Fibrous,
100 Portland type cement making
101 Color modification,
102 With subsequent treatment,
103 From $CaSO_4$, slag, cinders or residues,
104 Aluminous cement,
105 Oxy salt type cement
106 Magnesium oxy-chloride
107 With organic material
108 Cellulose or derivative,
109 Calcium sulfate
110 Plaster of Paris
111 With organic material
112 Protein or derivative
113 With other organic material,
114 Carbohydrate or derivative
115 Cellulose or derivative,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Inorganic settable ingredient containing
- Calcium sulfate
  - Plaster of Paris
    - With organic material
      - 116 Wax, bituminous or resinous material or tarry residue.
- 117 Slag,
- 118 Lime
  - 119 With organic material,
  - 120 Silica-lime mixtures,
- 121 Magnesia,

122 Pore forming,
123 Cellulose liberation liquor containing,
124 Protein or derivative containing
- 125 Gelatine, glue or derivative
  - 126 With carbohydrate or derivative
    - 127 Cellulose or derivative
      - 128 Cellulose ether or ester,
    - 129 Gum or derivative,
    - 130 Starch or derivative,
  - 131 With fat, fatty oil, fatty oil acid or salt thereof
    - 132 Fatty oil,
  - 133 With natural resin or derivative,
  - 134 With wax, bituminous material or tarry residue,
  - 135 With solvent or dispersing medium.
  - 136 With flux or plasticizer,
  - 137 With filler, dye or pigment,
- 138 Casein or derivative
  - 139 With carbohydrate or derivative
    - 140 Cellulose or derivative
      - 141 Cellulose ether or ester,
  - 142 With fat, fatty oil, fatty oil acid or salt thereof
    - 143 Fatty oil,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Protein or derivative containing
- Casein or derivative
  - 144 With natural resin or derivative,
  - 145 With wax, bituminous material or tarry residue,
  - 146 With solvent or dispersing medium,
  - 147 With flux or plasticizer,
  - 148 With filler, dye or pigment,
- 149 Prolamine or derivative
  - 150 With carbohydrate or derivative
    - 151 Cellulose or derivative,
  - 152 With wax, butuminous or resinous material or tarry residue,
  - 153 With flux, solvent or dispersing medium,
- 154 Seed protein or derivative,
- 155 Feathers, hair or leather
  - 156 With wax, bituminous or resinous material or tarry residue,
  - 157 With carbohydrate or derivative
    - 158 Cellulose or derivative,
  - 159 With fat, fatty oil, fatty oil acids or salts thereof,
  - 160 With wax, bituminous or resinous material or tarry residue,
  - 161 With flux, solvent or dispersing medium,

162 Carbohydrate or derivative containing
- 163 Cellulose or derivative
  - 164 Viscose
    - 165 Spinning solutions
      - 166 With delustering agent,
    - 167 Cuprammonium cellulose,
    - 168 Regenerated cellulose,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Carbohydrate or derivative containing
- Cellulose or derivative
  - 169 Cellulose ether or ester
    - 170 Emulsions,
    - 171 With fat, fatty oil, fatty oil acid or salt thereof
    - 172 With natural resin or derivative,
    - 173 With natural resin or derivative,
    - 174 With terpene or derivative
      - 175 With ether, ester or alcohol,
    - 176 With heterocyclic compound,
    - 177 With phosphorus containing compound,
    - 178 With carboxylic acid, salt or ester thereof
      - 179 Ether group containing,
      - 180 Polyhydric alcohol ester,
      - 181 Polycarboxylic acid, salt or ester thereof,
      - 182 Oxo- or oxy-acid or ester thereof,
      - 183 Lower fatty acid or ester thereof.
        - 184 With aldehyde or ketone,
        - 185 With ether or alcohol,
    - 186 With amine or amide,
    - 187 With aldehyde or ketone,
    - 188 With ether,
    - 189 With alcohol or phenol,
    - 190 With halogen containing carbon compound,
    - 191 With hydrocarbon, wax, bituminous material or tarry residue,
    - 192 With delustering agent,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Carbohydrate or derivative containing
- Cellulose or derivative
  - Cellulose ether or ester
    - 193 With filler, dye or pigment,
    - 194 With metal salt,
    - 195 Cellulose nitrate,
    - 196 Cellulose acetate,
    - 197 Cellulose ether,
    - 198 Processes,
  - 199 With fat, fatty oil, fatty oil acid or salt thereof,
  - 200 With natural resin or derivative,
  - 201 With wax,
  - 202 With bituminous material or tarry residue,
  - 203 With solvent or dispersing medium,
  - 204 With filler, dye or pigment,
- 205 Carbohydrate gum
  - 206 With fat, fatty oil, fatty oil acid or salt thereof.
  - 207 With wax bituminous or resinous material or tarry residue,
  - 208 With solvent or dispersing medium,
  - 209 With filler, dye or pigment,
- 210 Starch containing
  - 211 With fat, fatty oil, fatty oil acid or salt thereof,
  - 212 With wax, bituminous or resinous material or tarry residue,
  - 213 With solvent or dispersing medium,
  - 214 With filler, dye or pigment,
  - 215 With fat, fatty oil, fatty oil acid or salt thereof,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Carbohydrate or derivative containing
216 With wax, bituminous or resinous material or tarry residue,
217 With filler, dye or pigment,
218 Natural resin or derivative containing
219 With fat, fatty oil, fatty oil acid or salt thereof,
220 Fatty oil
221 Two or more kinds of fatty oil,
222 Drying oil
223 With sulfurizing or sulfonating agent,
224 With wax,
225 With bituminous material or tarry residue,
226 With terpene or derivative,
227 With hydrocarbon,
228 With filler, dye or pigment,
229 With wax, bituminous material or tarry residue,
230 With wax
231 Ester type wax,
232 With bituminous material or tarry residue
233 With sulfurizing or sulfonating agent,
234 With hydrocarbon,
235 With filler, dye, or pigment,
236 With solvent or dispersing medium
237 Alcohol containing,
238 Water containing,
239 Hydrocarbon containing,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Natural resin or derivative containing
240 With flux,
241 With filler, dye or pigment
242 Fibrous,
243 Fat, fatty oil, fatty oil acid or salt thereof containing
244 Fatty oil
245 With wax,
246 With bituminous material or tarry residue
247 With sulfurizing or sulfonating agent,
248 With filler, dye or pigment,
249 With sulfurizing or sulfonating agent,
250 Two or more kinds of oil
251 With filler, dye or pigment,
252 Drying oil,
253 With filler, dye or pigment
254 Zinc compound
255 Lithopone,
256 Lead compound
257 White lead,
258 Red lead,
259 Iron compound,
260 Calcium compound,
261 Carbonaceous,
262 Pigment treatment,
263 With preserving or stabilizing agent,
264 With drier,
265 With hydrocarbon,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Coating or plastic compositions

Fat, fatty oil, fatty oil acid or salt thereof containing
Fatty oil
266 With filler, dye or pigment,
267 With hydrocarbon,
268 With wax,
269 With bituminous material or tarry residue.
270 Wax containing
271 With solvent or dispersing medium,
272 With filler, dye or pigment,
273 Bituminous material or tarry residue containing
274 With sulfurizing or sulfonating agent
275 With filler, dye or pigment,
276 Rock asphalt,
277 Bituminous emulsion,
278 With solvent or dispersing medium,
279 With flux
280 With filler, dye or pigment,
281 With filler, dye or pigment
282 Fibrous,
283 Water containing,
284 Coal tar or pitch containing,
285 Hydrocarbon containing,
286 Inorganic materials only,
287 Miscellaneous.

Materials or ingredients

288 Pigments, fillers or aggregates
289 Lake containing,
290 Metallic powder containing,

106. COMPOSITIONS, COATING OR PLASTIC—Continued

Materials or ingredients

Pigments, fillers, or aggregates
291 Shell, scales, mica, or lamellate material,
292 Zinc compound containing
293 Zinc sulfide
294 Lithopone
295 Subsequent treatment,
296 Zinc oxide,
297 Lead compound containing
298 Lead chromate,
299 Titanium or zirconium compound containing
300 Titanium dioxide,
301 Cadmium compound containing,
302 Chromium compound containing,
303 Antimony compound containing,
304 Iron compound containing,
305 Ultramarine,
306 Alkali earth metal compound containing,
307 Elemental carbon containing,
308 With coating or dispersing agent,
309 Processes,
310 Driers,
311 Vehicles or solvents,
312 Opacifiers for enamels,
313 Ceramic fluxes,
314 Mortar addition materials
315 Set regulating,
316 Miscellaneous.

107 BREAD, PASTRY, AND CONFECTION MAKING.

1 **Composite cake and confection apparatus.**
2 **Shredded-cereal-biscuit apparatus.**
3 **Starch-molding apparatus.**
4 **Combined machines**
5 Printing and cutting lozenges,
6 Cutting and distributing.
7 **Miscellaneous.**
8 **Molding apparatus**
9 Loaf forming,
10 Rolling
11 Pills,
12 Sheeting,
13 Axial,
14 Die expressing,
15 Presses
16 Popcorn,
17 Tablet
18 Stationary mold,
19 Molds.
20 **Cutting apparatus**
21 Knife
22 Circular,
23 Rotary die,
24 Reciprocating die
25 Dough feeding,
26 Internal plunger.
27 **Depositing apparatus**
28 Valve cut-off
29 Transversely reciprocating.
30 **Mixers, kneaders, and beaters**
31 Aerating,
32 Moving receptacle
33 Rotating,
34 Roller,
Rotary dasher
36 Multiple,

107. BREAD, PASTRY, AND CONFECTION MAKING—Contd.

Mixers, kneaders, and beaters
Rotary dasher
38 Single
40 Horizontal.
43 **Sizing and salting apparatus.**
44 **Cleaning apparatus.**
45 **Stacking and packing apparatus.**
46 **Pastry boards.**
47 **Implements**
48 Ice-cream dishers,
49 Pie crimpers and trimmers,
50 Rolling pins,

52 Depositors,
53 Mixers, kneaders, and beaters.
54 **Processes.**
55 **Bakers' ovens**
56 Charging and removing devices
57 Endless carrier
58 Automatic pans or forms,
59 Reel,
60 Rotary hearth,
61 Wagon ovens,
62 Knockdown or separable,
63 Fluid circuit or indirect heating,
64 Attachments,
65 Doors,
66 Forming and baking plates,
67 Baker's peel.

108 ROOFS.

1 Miscellaneous.
4 Observatory domes.
5 Car
5.1 Monitor,
5.2 Lined
5.3 Metal lining,
5.4 Metal,
5.5 Frames
5.6 Carlines,
5.7 Carline brackets,
5.8 Flashings,
5.9 Clips.
16 Skylights.
2 Adjustable.
3 Portable.
32 Pyramidal.
6 Composite
6.5 Fireproof.
7 Fabric.
8 Slate and shingle
9 Laying.
10 Tile.
11 Thatch.
12 Lap joint.
Metallic
13 Miscellaneous,
17 Shingle,
18 Rib seam
19 Capped,
20 Standing seam
21 Capped,
22 Interlocking lap seam.
23 Trusses.
24 Ridges.
25 Valleys.
26 Flashings.
27 Fenders.

108. ROOFS—Continued.
28 Eaves troughs
30 Strainers.
33 Cleats and fasteners.

109 SAFES, BANK PROTECTION, AND RELATED DEVICES

1 **Miscellaneous**
2 **Bank protection devices**
3 Trapping mechanisms
4 Counter type
5 With protected transaction partitions
6 Plural closures
7 Interrelated fastening means
8 Rotary plural blade closure
9 Guard booths
10 Safety transaction and display partitions and counters
11 With movable protective shields
12 Plural shields
13 For plural openings or partitions
14 Roller type
15 Strip or slat type
16 Axially pivoted
17 Sliding
18 Gravity shield
19 With deal trays
20 With fluent material releasing, generating and/or distributing means
21 With alarm, signal or indicator
21.5 Protected voice transmitting path
22 **Convertible**
23 **Combined**
24 With jackets
25 With marking devices
26 With means to prevent successful use of explosives
27 Pressure relief mechanism
28 With drain or sump

109. SAFES, BANK PROTECTION, AND RELATED DEVICES—Continued.

Combined
29 With fluent material releasing, generating and/or distributing means
30 With auxiliary lock
31 With alarm, signal, or indicator
32 With operator and/or controller
33 Fusible, combustible or thermal actuator
34 Shock broken
35 With electrical surface charging means
36 With explosive devices
37 Wall contained detonator
38 With alarm, signal, or indicator
39 Movable receptacle initiated
40 Plural initiators
41 Wall penetrating and closure movement initiators
42 Wall penetrating initiated
43 Closure movement initiated
44 Lock or handle initiated
45 **Incidentally movable safe or compartment**
46 With dumping mechanism
47 Receding movement
48 Revolving for interior access
49 Complementary sections
49.5 **Shields and protectors**
50 **Supports and mountings**
51 Detachable from interior only
52 Lock to support
53 **Plural compartment**
54 With secret compartment
55 With deposit means between compartments
56 Plural safes
57 Enclosed

109. SAFES, BANK PROTECTION, AND RELATED DEVICES—Continued.

58 **Wall and panel structures, closures, and closure adjuncts**
58.5 Port type
59 With closure fastening means
60 Door ajar fasteners
61 Combined boltwork and pressure mechanism
62 Pressure mechanism
63 With entrapping prevention means
64 Closures
65 With discontinuous heat path
66 Deposit type
67 Plural
68 Inner and outer
69 Plural motions
70 Sliding and swinging
71 Rotary and axial movement
72 Lug or interrupted thread type
73 Sliding, rotary, or oscillating movement
74 With interfitting swinging closure and jamb parts
75 With seals
76 Composite
77 Jamb
78 Walls and panels
79 With joints and connections
80 Composite
81 With movable parts
82 Metallic and non-metallic
83 With metallic reenforcement in non-metallic binder
84 With non-metallic filler
85 Metallic
87 Floor bridges

110 FURNACES

1 **Furnace structure**
3 Cremation
3.5 Forge
5 Straw burners and feeders
6 Fire box, exterior, detachable
7 Wet fuel
8 Garbage and sewage
9 Dry closets
10 Steam boiler
11 Closed retort
12 Reverbatory platform
13 Rotary grate, vertical axis
14 Rotary retort
15 Drying conveyor
16 Underfeed
17 Fuel support above grate
18 Refuse
19 Brush, portable
20 Stubble
21 Stump
22 Gas or oil and solid fuel
23 Multiple series
24 Coking
25 Gas passing under grate
Double fire box
Alternate smoke return
26 Over fire
27 Under Fire
28 Fine fuel burned in suspension
29 Magazine
30 Cage grate
31 Gas producer
32 Progressive feed
33 Grate
34 Boiler controlled
Rotary
35 Horizontal axis
36 Vertical axis

110. FURNACES—Continued.

Furnace structure

Progressive feed
- Grate
  - 37 Raking bar
  - 38 Reciprocating bar
  - 39 Rocking bar
  - 40 Chain
    - 41 Multiple fuel
    - 42 Locomotive
    - 43 Bridge-wall feed
- 44 Underfeed
  - Center feed
    - 45 Continuous
    - 46 Separate charges
  - Progressive-feed grate
    - 47 Double
    - 48 Single
- 49 Smoke and gas return
- 50 Locomotive
- 51 Before passing boiler flues
- 52 From fire box
- 53 Feeding air and steam
- 54 Boiler controlled
- 55 Time limit
- 56 Heaters
  - 57 Locomotive
  - 58 Meeting furnace gases
- 59 Horizontal base
- 60 Fire box
  - 61 Locomotive
  - 62 Superimposed
    - 63 Intermediate draft
  - 64 Interstitial outlet
  - 65 Drop arch
  - 66 Door and bridge-wall arch
  - 67 Door arch
  - 68 Bridge-wall arch

110. FURNACES—Continued.

Furnace structure

Feeding air and steam
- 69 Undergrate
  - 70 Locomotive
  - 71 Deflectors
- 72 Feeding air
- 73 Horizontal base
- 74 Hollow grate
- 75 Fire box
  - 76 Locomotive
  - 77 Double

Feeding steam and water
- 78 Undergrate
- 79 Feeding steam
- 80 Fire box
- 81 Feeding water
- 4 Horizontal cylindrical boiler
- 82 Horizontal base
- 83 Reversible draft
- 84 Downdraft
- 85 Grateless
- 86 Fire box
  - 87 Locomotive
  - 88 Exterior, detachable
  - 89 Adjustable
  - 90 Superimposed
    - 91 Intermediate draft
  - 92 Interstitial outlet
  - 93 Drop arch
  - 94 Door and bridge-wall arch
  - 95 Door arch
  - 96 Bridge-wall arch
- 97 Baffles and heat retainers
- 98 Water-tube boilers
- 99 Arches
- 100 By-pass flue

110. FURNACES—Continued.

- 101 **Fuel feeders**
- 102 Shavings and sawdust
- 103 Boiler controlled
- 104 Blower
  - 105 Hopper
  - 105.5 Locomotive stoker type
  - 106 Pulverizer
- 107 Bridge wall
- 108 Hopper
  - Pusher
    - 109 Reciprocating
    - 110 Screw
  - Spreader
    - 111 Carrier
      - 112 Door
    - 113 Oscillating
    - 114 Reciprocating plunger
    - 115 Rotary
  - Chute
    - 116 Door
      - 117 Multiple charge
  - 118 Vertical drop
- 119 **Spark arresters**
- 120 Furnace conductor
- 121 Combined stack and smoke box
- 122 Smoke box
  - 123 Draft regulator
  - 124 Divided
  - 125 Hood
  - 126 Vertical drum
  - 127 Ejector
  - 128 Water receptacle
  - 129 Discharge valve
- 145 **Spark and smoke conductors**
- 146 Train

110. FURNACES—Continued.

- 147 **Draft regulators**
- 148 Separation of gases
- 150 Steam injector
  - Smoke box
    - 157 Feeding air
      - 158 Door operated
  - Stack
    - 159 Portable
    - 160 Air jet
      - 161 Steam injected
    - 162 Fan exhaust
    - 163 Damper
- 165 **Ash receiving and handling devices**
- 166 Ash pans
  - 167 Dumping
    - 168 Conjoined floor sections
    - 169 Reciprocating discharge valve
    - 170 Scraper
    - 171 Steam and water attachments
- 172 **Fronts**
- 173 **Doors**
  - 174 Feeding air and steam
  - 175 Feeding air
  - 176 Operators
    - 177 Motor
    - 178 Pedal
  - 179 Fluid screens
  - **Doors and casings**
  - 180 Cooling
- 181 **Door casings and arches**
  - 182 Feeding air
- 182.5 **Tuyeres**
  - 182.6 Forge
- 184 **Smokestacks**

U. S. GOVERNMENT PRINTING OFFICE: 1945

111 PLANTING.

1 **Miscellaneous.**
2 **Plant setting.**
3 Drilling machines,
4 Manually-operated implements.
5 **Pipe or strand.**
6 **Liquid or gas**
7 Drilling machines.
8 **Drilling and broadcasting**
9 Main and auxiliary frame machines.
10 **Broadcasting**
11 Machines with scatter
12 Main and auxiliary frame,
13 Main and auxiliary frame machines.
14 **Drilling**
15 Hill-planting machines
16 Check correcting
17 With automatic regulator.
18 Frame and planting-element arrangement
19 With tractive-belt feed drive,
20 Sectional main frame
21 Break joint,
22 Main and auxiliary frame
23 Rotary-marker operator,
24 Hopper-carrying auxiliary,
25 Depositing and marking mechanisms
26 Powder marking,
27 Driving marking
28 Revolving,
29 Driven marker
30 Plunging
31 Hill covering,
32 Revolving,
33 Marking mechanisms,

111. PLANTING—Continued.
Drilling
Hill-planting machines
34 Depositing mechanisms
35 Interchangeably operable,
36 Primarily axle-driven
37 Intermittently controlled
38 Check-wire tripped
39 Both feeder and valve,
40 With wire-actuated valve,
41 With wire-actuated valve,
42 Endless-belt tripped,
43 Line-wire driven
44 Reel carried,
45 Check-wire tripped
46 Both feeder and valve,
47 Trip-fork mechanisms,
48 Guides,
49 Wire-end-anchoring devices,
50 Manually operated,
51 Accumulators,
52 Frame and planting-element arrangement
53 Sectional main frame
54 Flexible
55 With auxiliary frame,
56 Break joint,
57 Extensible
58 V-shaped,
59 Main and auxiliary frame
60 Plurality of auxiliaries
61 Unitarily controlled,
62 Floating auxiliary
63 Hopper carrying
64 Detachable
65 Single row,
66 Tool-bar type
67 With lift and ungear,
68 With crank-axle lift,

111. PLANTING—Continued.
Drilling
Frame and planting-element arrangement
69 With adjustable planter elements,
70 Rigid
71 Single row
72 Manually operated depositing mechanism,
73 Multiple depositing,
74 Revolving hopper,
75 Vibrating hopper,
76 Vibrating delivery chute,
77 Rotating dispenser
78 Axle mounted,
79 Single-row implements
80 Multiple depositing,
81 Planter-element arrangement,
82 Hand propelled,
83 Lister units,
84 Drag-bar units,
85 Drill sets,
86 Drill teeth
87 Rotary furrower
88 Multiple disk.
89 **Dibbling**
90 Revolving-hopper implements
91 Revolving-dibble-carrier implements,
92 Manually operated implements
93 Machine attached,
94 Spacing in hill,
95 Regulated discharge
96 Sliding-plunger control,
97 Multiple-staff control,
98 Footplate control.

112 SEWING MACHINES.

1 **Miscellaneous.**
2 **Special machines**
3 Mattress sewing,
4 Jacquard card sewing,
5 Lacing shoe-uppers,
6 Broom-sewing,
7 Carpet sewing
8 Clamps,
9 Rug sewing,
10 Bag sewing,
11 Sewing filled sacks,
12 Sewing hats
13 Work supports
14 Rotary,
15 Guides and gages,
16 Glove and fur sewing
17 Dyeing feature,
18 Work holding and feeding
19 Clamp,
20 Guiding,
21 Book sewing
22 Knotting,
23 Straw braid,
24 Straw sewing,
25 Looped fabrics
26 Preparing,
27 Work holding and feeding,
28 Leather sewing
Shoe sole
29 Separating and indenting,
30 Tack pulling,
31 Fair stitch,
32 Loop lock,
33 Tongue lock,
34 Chain stitch
35 Curved needle,

112. SEWING MACHINES—Continued.
Special machines
Leather sewing
Shoe sole
36 Lock stitch
37 Curved needle
38 Oscillating and rotating shuttle,
39 Back gauges and rests,
40 Guards,
41 Heating,
42 Waxing,
43 Lubricating and moisten'ng,
44 Welt slitting and beveling,
45 Channeling,
46 Welt handling,
47 Feeding
48 Awl,
49 Needle,
50 Channel guides,
51 Edge and crease guides,
52 Welt guides,
53 Chain stitch,
54 Lock stitch,
Thread handling
55 Orbital-movement loopers,
56 Cast-offs,
57 Take-ups,
58 Pull-offs,
59 Tensions,
60 Presser devices
61 Locking,
62 Work supports,
63 Tube forming,
64 Fringe forming,
65 Buttonhole
66 Eyelet making,
67 Start and stop mechanism,
68 Cutting,
69 Thrum mechanism,

112. SEWING MACHINES—Continued.
Special machines
Buttonhole
70 Clamp feeding
71 With rotatable needle bar,
72 Right line and rotary,
73 Vibrating needle,
74 Spreading,
75 Gauging,
76 Clamps,
77 Attachments,
78 Embroidering
79 Turfing
80 Hand implements,
81 Hemstitch
82 Universal feed,
83 Horizontal needle
84 Pattern controlled
85 Boring,
86 Fabric shifting,
87 Stopping,
88 Article attaching,
89 Boring,
90 Fabric shifting
91 Balancing
92 Spring,
93 Stitch forming
94 Short thread,
95 Shuttle type,
96 Thread take-up,
97 Thread tension,
98 Vertical needle
99 Attaching ornaments
100 Thread
101 Attachments,
102 Fabric shifting
103 Frames,
104 Article attaching
105 Hook and eye
106 Feeding,

112. SEWING MACHINES—Continued.

Special machines

Article attaching
- Hook and eye
  - 107 Carriers,
- 108 Eye-shank button
  - 109 Vibrating needle,
- 110 Flat button
  - 111 Vibrated needle,
  - 112 Vibrated clamp,
- 113 Feeding,
- 114 Clamps,
- 115 Attachments,
- 116 Crocheting,
- 117 Quilting
- 118 Fabric shifting
  - 119 Frames,
- 120 Infolding,
- 121 Darning.

Work manipulating

- 122 Trimmers
  - 123 With stitching mechanism,
  - 124 Rotary,
  - 125 Manual control,
  - 126 Laterally adjustable,
  - 127 Ply separating,
  - 128 Needle-bar operated,
  - 129 Cutters,
- 130 Severing,
- 131 Creasers and markers,
- 132 Rufflers and gatherers
  - 133 Smocking,
  - 134 Attachments
    - 135 Vibrating blade,
- 136 Guides
  - 137 Binders
    - 138 Strip reversing,
  - 139 Braiders and corders,
  - 140 Blind stitch,

112. SEWING MACHINES—Continued.

Work manipulating

Guides
- 141 Hemmers
  - 142 Lap seam,
  - 143 Adjustable,
- 144 Tucking
  - 145 Box plait,
  - 146 Spacing,
- 147 Folding,
- 148 Fabric holding,
- 149 Fringe turning,
- 150 Pressure,
- 151 Presser bar attached,
- 152 Strip,
- 153 Edge.

154 **Stitch forming**

- 155 Multiple machines,
- 156 Knot tying,
- 157 Zigzag
  - 158 Vibrating needle
    - 159 Shifting looper,
  - 160 Surging,
  - 161 Purling,
- 162 Overseaming,
- 163 Multiple needle
  - 164 Shuttle type,
  - 165 Chain and double chain
    - 166 Multiple looper,
  - 167 Adjustable,
- 168 Convertible,
- 169 Hand implements,
- 170 Short thread
  - 171 Double-pointed needle,
  - 172 Overedge,
- 173 Running stitch
  - 174 Crimping,
  - 175 Stationary needle,
- 176 Blind stitch
  - 177 Overseaming,

112. SEWING MACHINES—Continued.

Stitch forming

Blind stitch
- 178 Work handling,
- 179 False hemstitch,
- 180 Bobbin ejector,
- 181 Revolving-hook type
  - 182 Timing,
  - 183 Reciprocating bobbin,
  - 184 Vertical axis,
- 185 Shuttle type
  - 186 Shuttle replenishing,
  - 187 Loop spreaders,
  - 188 Bobbin latch,
  - 189 Rotary
    - 190 Timing.
    - 191 Vertical axis,
  - 192 Oscillatory
    - 193 Vertical axis,
  - 194 Reciprocatory
    - 195 Longitudinal,
  - 196 Holders and raceways,
- 197 Chain or double chain
  - 198 Hooked needle,
  - 199 Oscillating or reciprocating looper,
  - 200 Four-motion looper,
  - 201 Rotating looper,
  - 202 Vertical-axis looper,
- 203 Feeding
  - 204 Universal,
  - 205 Irregular,
  - 206 Needle and helper,
  - 207 Clamp,
  - 208 Differential
    - 209 Adjustment,
  - 210 Adjustment
    - 211 Rotary,
  - 212 Upper
    - 213 Needle,

112. SEWING MACHINES—Continued.

Stitch forming

Feeding
- 214 Rotary,
- 215 Four motion,
- 216 Dogs,
- 217 Seam finishing.

218 **Elements**

- 219 Starting and stopping,
- 220 Driving mechanisms
  - 221 Needle,
- 222 Needles
  - 223 Thread releasing,
  - 224 Threading structure,
  - 225 Setting and threading attachments,
  - 226 Clamping,
  - 227 Guiding,
- 228 Revolving hooks
  - 229 Bobbin tensioning,
  - 230 Sectional,
  - 231 Bobbin holders and casings,
- 232 Shuttles
  - 233 Tensioning,
  - 234 Longitudinally reciprocating,
- 235 Presser devices
  - 236 Embroidering and darning,
  - 237 Lifting
    - 238 With tension release,
    - 239 Automatic,
  - 240 Detachable connections,
- 241 Take-ups
  - 242 Pull-offs
    - 243 Automatic control,
  - 244 Presser-bar controlled,
  - 245 Needle-bar actuated,
  - 246 Adjustable,
  - 247 Resilient,
  - 248 Rotary,
  - 249 Stationary cam,

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112. SEWING MACHINES—Continued.

Elements

Take-ups

250 Clamp carrying,
251 Bobbins,
252 Thread cutting,
253 Thread end clamps,
254 Tensioning
255 Intermittent,
256 Lubricating,
257 Attachment holders,
258 Frames
259 Heads,
260 Work supports,
261 Guards.
262 **Methods and seams**
263 Hat sewing,
264 Buttonhole,
265 Article attaching,
266 Embroidery,
267 Blind stitch
268 Overedge,
269 Overedge.

113 SHEET-METAL WARE—MAKING:

1 **Miscellaneous.**
7 **Can making machines**
8 Body forming and side seaming
9 Soldering
10 Blank feeding,
11 Blank feeding,
12 Side seaming,
Head seaming
13 Soldering,
14 Feeding and applying,
15 Rip-seam making,
16 Die
17 Axial rolling,
18 Sectional,
19 Roller
Rotary chuck
20 Pattern-controlled tool
21 Automatic clutch,
22 Laterally rocking tool holder,
23 Stationary seaming tool,
Stationary chuck
Rotary seaming tool
24 External,
25 Internal,
Head feeding and applying
Body feeding
26 Chute,
27 Endless-chain carrier,
28 Rotary-drum carrier,
29 Rotary-table carrier,
30 Head applying
31 Sectional guide.
32 **Pens and penholders.**
33 **Tube making**
34 Side-seam compressing,
35 Spiral seaming,

113. SHEET-METAL WARE-MAKING—Continued.

Tube making

Transverse seaming
36 Die,
37 Roller.
38 **Die shaping**
38.1 Necking cartridge cases,
39 Dental,
40 Eyelets,
40.5 Lacing studs,
41 Rolling hollow bodies,
42 Cutting
42.5 Shoe-shank stiffeners,
43 Combined machines,
44 Fillers and forcers,
45 Fluid operated,
46 Drawing,
47 Roller and concave,
48 Expanding die,
49 Dies and die holders,
50 Ejectors,
51 Processes.
52 **Spinning**
53 Carriage feed, pattern controlled.

Seaming machines

54 Compressing and folding
55 Roofers' carriages,
56 Roofers' tongs,
Compressing
57 Die,
58 Roller,
59 **Soldering**
Cans
60 Side seam
Endless-chain carrier
61 Bath,
62 Soldering iron,
63 Reciprocating carrier,

113. SHEET-METAL WARE-MAKING—Continued.

Soldering

Cans
Side seam
Rotary-table carrier
64 Bath,
65 Flame,
66 Soldering iron,
67 Head seam
68 Axial rolling,
Rotary chuck
69 Bath,
70 Flame,
71 Soldering iron,
Endless-chain carrier
72 Bath,
73 Flame,
74 Soldering iron,
Rotary-table carrier
75 Bath,
76 Flame,
77 Soldering iron,
78 Bath,
79 Flame,
80 Cap preparing, solder affixing, and gasket applying,
81 Cap
82 Hermetic,
Rotary chuck
83 Flame, endless-chain carrier,
84 Stationary tool
85 Endless-chain carrier,
86 Rotary-table carrier,
87 Rotary tool
88 Endless-chain carrier,
89 Rotary-table carrier,
90 Shifting tray,
91 Tipping,

113. SHEET-METAL WARE-MAKING—Continued.

Soldering
92 Heat and pressure,
Solder feeders
93 Liquid,
94 Solid,
Flux feeders
95 Liquid,
96 Solid,
97 Wipers,
98 Coolers,
99 Clamps
100 Vessel,
101 Trough,
102 Pipe,
103 Expanding mandrel,
104 Adjustable arms,
105 Irons
106 Capping
107 Heaters
108 Electric,
109 Solder feeding,
110 Solder forms,
111 Tools and appliances,
112 Processes.
113 **Work feeders**
114 Cap and head,
115 Can body.
116 **Processes**
117 Bearing cages,
118 Radiators.
119 Electrical contacts, connectors, and terminals,
120 Receptacles and containers
121 Covers.

114 SHIPS.

0.5 **Miscellaneous.**
1 **Warships**
2 Rams
3 Battering,
4 Floating batteries,
5 Turret
6 Combined elevating and rotary,
7 Elevating,
8 Rotary,
9 Armored
10 Deflectors,
11 Belting and plating
12 Compound
13 Buffers.
14 Screens and shields,
15 Concealment.
16 **Submarine vessels**
17 Torpedo boats,
16.4 Life and vessel saving devices
16.5 Buoys,
16.6 Escapes
16.7 Boats or buoys,
16.8 Salvage.
18 **Torpedo boats**
19 Spar.
20 **Torpedoes**
21 External control.
22 Separable sections,
23 Steering mechanism
24 Gyroscope,
25 Depth regulation.
26 **Scows**
27 Dumping and unloading
28 Sectional
29 Hinged,
30 Separable,

114. SHIPS—Continued.

Scows
Dumping and unloading
31 Platform
32 Tilting
33 Carriers,
34 Conveyors,
35 Side doors,
36 Bottom doors
37 Flooding gates,
38 Turnover.
39 **Sailboats.**
40 **Ice breakers**
41 Rams,
42 Cutters.
43 **Ice boats.**
43.5 **Mother ships, floating landing platforms and harbors.**
44 **Vessel raising and docking**
45 Floating dry docks
46 Sectional,
47 End gates,
48 Elevators,
49 Camels, caissons, and pontoons,
50 Submerged
51 Hoisting,
52 Air tanks
53 Camels, caissons, and pontoons,
54 Inflatable bags,
55 Sand and mud loosening.
56 **Form**
57 Screw-propeller type,
58 Paddle wheelers,
59 Spindle,
60 Canal and ferry boats,
61 Divided hull,
62 Concave bottom,
63 Flat bottom.

114. SHIPS—Continued.

65 **Building**
66 Observation boats,
66.5 Hydroplane boats,
67 Antifriction surfaces,
68 Insubmergible vessels
69 Linings and fillings,
70 Canal and ferry boats,
71 Cabins,
72 Freighters
73 Bulk cargo
74 Liquid,
75 Antishifting devices,
76 Ceilings and floors,
77 Sectional,
78 Bulkhead and compartment,
79 Iron
80 Corrugated,
81 Tubular,
82 Wood,
83 Bracing and staying,
84 Sheathing and planking,
85 Decks,
86 Calking and seaming,
87 Knees,
88 Joints.
89 **Spars**
90 Masts and masting
91 Swinging,
92 Cross and trestle trees,
93 Coats, shields, and steps,
94 Heads and irons,
95 Yards
96 Trusses and parrels,
97 Gaffs, booms, etc.
98 Pivoted,
99 Crotches and supports,
100 Spar irons,
101 Fair leaders and chocks.

114. SHIPS—Continued.

102 **Sails and rigging**
103 Sails
104 Reefing and furling
105 Fore-and-aft sails
106 Rolling,
107 Rolling,
108 Fastening devices,
109 Rigging screws and stretchers
110 Tension relievers,
111 Running rigging,
112 Mast travelers,
113 Hoops and connections,
114 Cringles and hanks,
115 Clews and thimbles.

116 **Bulkheads and doors**
117 Doors
118 Automatic
119 Sliding,
120 Sliding.

121 **Ballasting**
122 Antirolling,
123 Floats,
124 Shifting weights,
125 Water tanks,
126 Fins and boards.

127 **Centerboards**
128 Steering,
129 Multiple,
130 Vertical drop and pivoted swing
131 Sectional,
132 Pivoted
133 Sectional
134 Fan,
135 Lateral,
136 Lateral swing,
137 Lateral tilt,
138 Vertical drop
139 Sectional.

114. SHIPS—Continued.

140 **Keels**
141 Vertical adjustment,
142 Bilge,
143 Rocking.
144 **Steering mechanism**
145 Speed retarders,
146 Auxiliary,
147 Paddles and wheels
148 Channels,
149 Keel,
150 Fluid pressure
151 Jet,
152 Fins,
153 Foot,
154 Wheel-shaft gearing
155 Screw
156 Intermediate gear,
157 Right and left
158 Intermediate gear,
159 Segmental rack,
160 Wheel and drum
161 Intermediate gear,
162 Rudders
163 Multiple,
164 Auxiliary,
165 Hanging and shipping,
166 Tubular,
167 Sectional,
168 Jury,
169 Post bearings and heads,
170 Brakes
171 Hydraulic,
172 Locks.
173 **Ports**
174 Stoppers
175 Gun port,
176 Hinged,
177 Light and air
178 Hinged covers.

114. SHIPS—Continued.

179 **Hawse pipes**
180 Stoppers and covers,
181 Friction rollers.
182 **Scuppers.**
183 **Bilge discharge**
184 Ejectors
185 Ship's motion,
186 Ash.
187 **Smokestacks.**
188 **Furniture**
189 Cabins and staterooms,
190 Life-preserver racks,
191 Self-leveling
192 Berths
193 Single pivot,
194 Chairs,
195 Tables.
Valves
197 Boat plugs,
198 Sea cocks.
199 **Cable stoppers**
200 Chain.
201 **Hatches and covers**
202 Sliding,
203 With fasteners,
204 **Travelers**
205 Tension relievers.
206 **Anchors**
207 Fluke
208 Pivoted,
209 Drags or sea anchors.
210 **Anchor trippers.**
211 **Ventilation**
212 Valves.
213 **Tension relievers**
214 Fluid,
215 Cable,
216 Couplers
217 Safety release.

114. SHIPS—Continued.

218 **Bitts, cleats, and pin rails.**
219 **Fenders**
220 Roller.
221 **Implements**
222 Hull cleaning,
223 Rigging,
224 Calking, paying, etc.,

226 Clamps.
227 **Leak stoppers**
228 Interior,
229 Aprons, mats, etc.
230 **Mooring devices**
231 Ferry slip.
232 **Oil distributers**
233 Ship structure,
234 Drags and floats.
235 **Towing**
236 Steering mechanism
237 Indicators.
238 **Torpedo launching**
239 Outboard.
240 **Torpedo guards**
241 Nets.

115 MARINE PROPULSION.

0.5 **Miscellaneous.**
1 **Land and water boats**
2 Pedomotors.
3 **Wind motors.**
4 **Wave propulsion**
5 Oscillating weight.
6 **Towing**
7 Cable systems,
8 Track systems,
9 Ground wheels or polers
11 **Jet**
12 Steering,
13 Explosive,
14 Hydraulic
15 Pneumatic drive,
16 Wheel drive.
19 **Buoyant propeller**
20 Rotary hull.
21 **Manual power**
22 Catamaran,
23 Paddle wheel,
24 Screw.
25 **Marine pedomotors**
26 Catamaran,
27 Bicycle propelled.
34 **Screw propeller**
35 Steering,
37 Multiple screw
38 Side,
39 Channel or way,
40 Self-clearing,
41 Depth regulation,
42 Casing or shield,
43 Propeller-shaft brakes.
49 **Paddle wheel**
50 Steering,
52 Horizontal or inclined,
53 Channel or way,

115. MARINE PROPULSION—Contd.
Paddle wheel
54 Depth regulation.
63 **Chain propeller**
64 Steering and adjustable.
66 **Crank paddle**
67 Steering and adjustable.
17 **Portable propellers**
18 Steering.
28 **Oscillating propellers**
29 Steering,
30 Reversing.
31 **Reciprocating propellers**
32 Steering,
33 Reversing.

116 SIGNALS AND INDICATORS.

1 **Miscellaneous.**
2 **Combined functions**
3 Horns with lamps,
4 Alarms with indicators
5 Burglar or fire,
6 Burglar alarms
7 Light producing,
8 Locks
9 Door-knob controlled
10 Combined knob and bell,
11 Detonating,
12 Door securing
13 Braces,
14 Chain or link,
15 Detonating,
16 Sash fastening
17 Detonating.
18 **Code signaling**
19 Ship's course,
20 Heliographic.
21 **Ships' telegraphs.**
22 **Periodic**
23 Detonating,
24 Horns and whistles,
25 Bells.
26 **Nautical**
27 Submarine.
28 **Vehicle**
29 Station indicators,
30 Car and train markers,
31 Steering-wheel-position indicators,
32 Collision-released identification tags,
33 Theft preventing,
34 Tire inflation or deflation,
35 Motion and direction
36 Combined with vehicle control,

116. SIGNALS AND INDICATORS—Continued.
Vehicle
Motion and direction
37 Speed controlled
38 Governor actuated,
39 Pneumatically operated,
40 Lazy-tong operated,
41 Fan type,
42 Window-exhibited sign or shutter
43 Rotable,
44 Sliding,
45 Movable cover or screen,
46 Rotatable
47 Pointer
48 Illuminated,
49 Illuminated casing,
50 Sliding,
51 Pivoted
52 Laterally swinging arm
53 Multiple arms,
54 Illuminated,
55 Pneumatic train pipe
56 Vehicle-energy actuated
57 Speed limit,
58 Pneumatic,
59 Diaphragm horns,
60 Bells
61 Friction wheel,
62 Bicycle pedal.
63 **Street traffic.**
64 **Elevator.**
65 **Pneumatic.**

67 **Alarms**
68 Elevator or hoist,
69 Rain,
70 Fluid-pressure variation,
71 Gristmill,

116. SIGNALS AND INDICATORS. Continued.

Alarms

72 Poison container,
73 Operation counting,
74 Speed limit,
75 Burglar
76 Till,
77 Portable
78 Drop detonating,
79 Knob attached,
80 Key or keyhole,
81 Cord controlled,
82 Floor supported,
83 Detonating,
84 Pickpocket,
85 Closure operated
86 Door and window
87 Detonating
88 Reciprocating hammer
89 Rotary release.
90 Gear and friction wheel
91 Clockwork bell
92 Door knob
93 Automatic wind,
94 Cable control,
95 Single-stroke bell
96 Door knob,
97 Door knob,
98 Tread operated,
99 Portable receptacle,
100 Closure operated,
101 Thermal
102 Expansion control
103 Fluid,
104 Ignition control
105 Explosive,
106 Fusible control,
107 Buoy
108 Whistling,

116. SIGNALS AND INDICATORS—Continued.

Alarms

109 Liquid level
110 Float
111 Clockwork bell,
112 Fluid flow,
113 Shoal water.
114 Indicators
115 Shaft rotation,
116 Speed limit,
117 Fluid flow,
118 Liquid level,
119 Book,
120 Game,
121 Medicine dose,
122 Elevator position,
123 Tube-guided signal element,
124 Position
124.1 Radio
124.2 Rotating
124.3 Covered
124.4 Illuminated.
125 Valve,
126 Ship's rudder,
127 Brake piston,
128 Grouped annunciators,
129 Rotary,
130 Hand set
131 Combined with changeable exhibitor,
132 Semaphore type,
133 Rotary,
134 Pivoted,
135 Sliding,
136 Peg.
137 Horns and whistles
138 Motor exhaust or suction,
139 Manually actuated air compressor,
140 Variable tone,

116. SIGNALS AND INDICATORS—Continued.

Horns and whistles

141 Chime,
142 Diaphragm horns
143 Rotary striker
144 Toothed wheel
145 Parallel diaphragm.
146 Ball contacts.
147 Sirens.
148 Bells.
149 Sound modification,
150 Swinging,
151 Pneumatic actuation,
152 Gong type
153 Door knob contained,
154 Rotary,
155 Pivoted striker
156 Multiple,
157 Multiple stroke
158 Rotary striker
159 Lever operated,
160 Plunger operated,
161 Escapement
162 Clockwork type,
163 Double.
164 Spring impact,
165 Pull cord or rod,
166 Bicycle clamp,
167 Fixed, with pivoted striker,
168 Spiral-spring type,
169 Tube or rod type,
170 Animal and sleigh type,
171 Hand,
172 Bell pulls, cranks, and push buttons.
173 Flags and flagstaffs
174 Nonfouling,
175 Metallic flags.

117 NO CLASS.

118 NO CLASS.

1 **Identifying or fraud preventing**
2 **Restoring or repairing**
3 **Plants, flowers and biological specimens**
4 **With cutting**
5 Bitumen coated base
5.5 **Utilizing masking coating**
6 **Removable protective coating**
7 **With stretching or tensioning**
8 **With surface deformation or removing portions of coating**
8.5 Utilizing mask or stencil
9 With application of fibers or particulate material
10 Unset or softened coating
11 Textile, leather or paper-like base
12 **With printing**
13 With application of fibers or particulate material
14 Opposite sides of base coated
15 Textile, leather or paper-like material
16 **With application of fibers or particulate material**
17 Utilizing electrical or radiant energy
18 Hollow articles or forms
19 With excess removal
20 Non-uniform speed or non-rectilinear base motion
21 With fusion or coalescence of particulate material
22 Metal or metal forming particles
23 Vitrifiable particles
24 Plural direction application of coating material
25 Localized areas or plural particulate materials
26 With coating of fibers or particulate material
27 Prior to application to base
28 Textile, leather or paper-like base
29 Plural superposed different coatings
30 At least one coating bituminous
31 Metal particulate material
32 Bitumen coated base
33 Painted, varnished or adhesive-coated base
33.1 **Electron emissive coating preparing**
33.2 Mosaic
33.3 Alkaline-earth or alkali-metal coating material
33.5 **Fluorescent or phosphorescent coating preparing**
34 **Photo-sensitive coating preparing**
35 **Mirror or reflector making**
35.5 **Stencil blank making**
35.6 **Hectographic or copying surface**
36 **Manifold or transfer making**
37 **Non-uniform coating**
38 Printing, masking or stenciling
39 Marbelizing
40 Vitreous coating
41 Wrinkled or crackled coatings
42 By crystallization or precipitation
43 Striping, bordering or edging
44 Textile, leather or paper-like base
45 Plural superposed different coatings
46 **Flame contact, carbonizing or coating ingredient combustion**
47 **With preparatory treatment of the base**
48 With shielding or spacing means
49 Metal base
50 Metal coating
51 From molten metal bath
52 Supernatant flux or treating agent
53 Vitreous coating
54 Siliceous or calcareous base
55 Proteinaceous base
56 Cellulosic base
57 Wood
58 Holing
59 With coating by immersion
60 Paper or cellulose derivative sheet
61 Vacuum or reduced pressure treatment
62 **With treatment of the coating**
63 Solvent or softening treatment
64 Polishing, leveling or luster modifying
65 Heat and/or pressure treatment
66 **Combined or non-coating operations**
67 **Diverse types of coating operations**
68 **Application to opposite sides of sheet or web**
68.5 Adhesive tape or base
69 **Plural superposed different coatings**
70 At least one coating containing vitreous or settable inorganic material
71 At least one coating metallic or free metal containing
72 At least one coating containing synthetic resin
73 Cellulose derivative containing coating
74 Metal base
75 Metal base
76 Textile, leather or paper-like base
77 At least one coating containing rubber or derivative
78 Cellulose derivative containing coating
79 Metal base
80 Textile, leather or paper-like base
81 At least one coating containing protein or derivative
82 Cellulose derivative containing coating
83 Textile, leather or paper-like base
84 At least one coating, carbohydrate or derivative containing
85 Cellulose derivative containing
86 Textile, leather or paper-like base
87 At least one coating containing fat, fatty oil, fatty oil acid or salt
88 Siliceous or calcareous base
89 Metal base
90 Textile, leather or paper-like base
91 At least one coating containing natural resin or terpene compound
92 At least one coating containing wax, bituminous or tarry residue
93 **Utilizing electrical or radiant energy**
94 **Cylinders, rolls, or hollow articles**
95 Internal coating
96 Spraying
97 Glass or metal base
98 **Foraminous or open-work articles or forms**
99 Metal base
100 **Flake, granular or particulate material**

101 **Utilizing centrifugal force**
102 **Excess coating or coating ingredient removal, recovery or recirculation**
103 **Baking, drying, or cooling**
104 **Projection onto base (e. g., spraying)**
105 Metal coating material
106 **Coating by vapor, gas, mist or smoke**
107 Metal coating
108 Wood base
109 **Rumbling**
111 **Utilizing roller, scraper or brush applicator**
112 **Utilizing web, wick or absorbent applicator**
113 **Immersion**
114 Molten metal bath
115 Running lengths of base material
116 Wood base
117 Partial (including end impregnation)
118 **Base supplied substituent**
119 **Vacuum or inert atmosphere**
120 **Miscellaneous procedures**
121 **Particular base or coating**
122 Adhesive tape or base
123 Siliceous or calcareous base
124 Glass base
125 Vitreous coating
126 Asbestos or mineral wool
127 Metal base
128 Wire, rod, or filament
128.4 Resinous coating (e. g., varnish)
128.7 Rubber or derivative containing coating
129 Vitreous coating
130 Metal coating
131 In metallic state
132 Resinous coating (e. g., varnish)
133 Rubber or derivative containing coating
134 Fat, fatty oil, fatty oil acid or salt
135 Wax, bitumen or tarry residue

Particular base or coating
135.5 Producing liquid repellent, gas permeable base
136 Heat- or fireproofing coating
137 Organic and inorganic materials containing
138 Inorganic materials only
138.5 Preserving textiles (including mothproofing)
138.8 Synthetic resin base
139 Rubber base
139.4 Crease proofing textiles
139.5 Textile lubricating, conditioning or handle improving
140 Felted or loose fibrous material base
141 Proteinaceous base
142 Leather, feathers or horny material
143 Cellulose or derivative base
144 Regenerated cellulose, cellulose ether or ester base
144.5 Luster modifying
145 Resinous coating
146 Rubber or derivative containing coating
147 Wood base
148 Synthetic resin, rubber, protein or carbohydrate
149 Natural resin, wax, fatty, bituminous or phenolic-material
150 With heavy metal or aluminum
151 Heavy metal or aluminum
152 Paper base
153 Parchmentized
154 Organic material containing coating
155 Synthetic resin, rubber or derivative
156 Protein, carbohydrate or derivative
157 Cellulose or derivative
158 Natural resin, wax, bitumen or tarry residue
159 Iridescent or light-diffusing coating
160 Metallic or free metal containing coating
161 Synthetic resin containing coating
162 Rubber or derivative containing coating
163 Latex or rubber dispersion

Particular base or coating
164 Protein or derivative containing coating
165 Carbohydrate or derivative containing coating
166 Cellulose or derivative
167 Fat, fatty oil, fatty oil acid or salt containing coating
168 Natural resin, wax, bitumen or tarry residue containing coating
169 Inorganic materials only

118 NO. CLASS

119 ANIMAL HUSBANDRY

1 **Miscellaneous.**
Special culture
Aquatic
2 Crustacean
3 Fish,
4 Mollusk,
5 Aquariums,
6 Silkworm.
30 **Brooders and incubators.**
31 **Brooders.**
32 Central heater.
33 Fireless,
34 Lateral heater.
35 **Incubators**
36 Contact,
37 Electrical,
39 Hot air
40 Lateral heater,
41 Hot water
42 Lateral heater,
38 Fireless,
43 Trays
44 Egg turners.
45 **Nests and nest appliances**
46 Medicated nest eggs,
Trap nests
47 Combined,
48 Egg,
49 Fowl
50 Fowl released.
7 **Stock cars**
8 Convertible,
9 Decks,
10 Feeding and watering devices,
11 Partitions
12 Poultry,
13 Safeguards,
14 Vestibule,

119. ANIMAL HUSBANDRY—Con.
15 **Confining and housing devices**
15.5 Course.
15.6 Target releasing,
21 Fowl
22 Appliances,
23 Bird houses,
24 Perches
25 Antivermin,
26 Bird,
16 Barns and sheds,
17 Cages
18 Food and water holders,
19 Coops and kennels,
20 Pens and racks,
27 Stalls
28 Floors.
51 **Feeding devices**
70 Poultry exercising,
71 Suckling appliances,
52 Hoppers and troughs
53 Adjustable supply
53.5 Animal-controlled,
54 Animal-controlled supply
55 Platform,
56 Charge delivering,
57 Movable trough-controlled supply,
58 Racks and troughs
59 Animal excluding,
60 Racks,
61 Troughs
62 Animal opened,
63 Animal excluding,
64 Anticribbing,
65 Feed bags
66 Halter supported,
67 Harness supported,
68 Pole supported,
69 Standard supported.

119. ANIMAL HUSBANDRY—Con.
72 **Watering devices**
73 Temperature controlling.
74 Fountains and troughs
75 Animal-controlled supply
76 Platform.
77 Barometric,
78 Float-controlled supply
79 Oscillating valve,
80 Reciprocating valve,
81 Movable trough-controlled supply.
83 **Grooming devices**
85 Combined,
84 Pneumatic,
86 Currycombs
87 Dust and vermin trap,
88 Self-cleaning,
89 Curved and reticulated wire,
90 Plain bar,
91 Rotary,
92 Serrated bar,
93 Spike toothed,
94 Handles.
29 **Breaking and training devices.**
96 **Restraining devices**
97 Poultry,
98 Stocks,
99 Combined crates and neck stocks,
100 Combined slings and hopples,
101 Harness,
102 Slings,
103 Tables and trays,
104 Blinders,
105 Cow-tail holders,
106 Collars,
107 Drags and weights,
108 Hampering pads,

119. ANIMAL HUSBANDRY—Con.
Restraining devices
109 Hitching
110 Releasers
111 With lead line,
112 With sprayer,
114 Halter snap,
115 Reciprocating bar,
116 Rotatable shaft,
117 Rotary arm,
118 Ties
119 Movable,
120 Traveler,
121 Picket stakes,
122 Posts
124 Automatic take-up,
125 Disappearing,
123 Attachments,
126 Hopples
127 Fetter bars,
128 Shackles,
129 Mouth guards
130 Muzzles.
131 Baffles
132 Nostril attached,
133 Cage form,
134 Weaning bits,
135 Nose rings and clips,
136 Pokes
137 Bar and belt,
138 Bar and bow
139 Jointed bow.
140 Pivoted bar,
141 Bar and halter,
142 Face guards,
143 Shields
144 Horn,
145 Stallion,
146 Udder,

119. ANIMAL HUSBANDRY—Con.

Restraining devices

147 Stanchions
148 Multiple,
149 Rotatable
150 Stop lock,
151 Catching and holding tools
152 Crooks,
153 Loops,
154 Tongs,
155 **Stock sorters.**
82 **Gangways.**
95 **Manure pouches.**
156 **Antivermin treatment**
157 Daubing and rubbing,
158 Dipping and washing,
159 Dusting and spraying,
160 Fumigating.

120 STATIONERY.

1 **Combination devices**
2 Blotters and rulers,
3 Inkstands and calendars,
4 Inkstands and pen racks,
5 Self-opening,
6 Moisteners and sealers,
7 Pencil sharpeners and erasers;
8 **Miscellaneous.**
23 **Scholars' companions.**
9 **Pen and pencil cases**
16 Magic,
10 Compound
11 Automatic,
12 Screw and slide,
21 Clutch
22 Automatic,
20 Automatic catch,
13 Chalk holders,
14 Polypointed,
15 Sharpening,
17 Step by step,
18 Screw,
19 Slide,
24 **Blotters**
25 Hand attached,
26 Rotary,
27 Supports.
28 **Copy holders**
29 Movable copy
30 Roller feed
31 Positive grip,
32 Step-by-step movement,
33 Movable marker
34 Step-by-step movement.
35 **Envelop openers.**
35.5 **Stamp scarifiers.**
36 **Erasers**
37 Combination,

120. STATIONERY—Continued.
Erasers
38 Pencil attachments,
40 Rubber.
41 **Erasing shields.**
42 **Fountain pens**
43 Special use
43.5 Perforating,
44 Stylographic
45 Spring-actuated spindle,
46 Force feed and filler
47 Piston,
48 Valved,
49 Retractile pen section,
50 Feeders
51 Modified nib,
52 Modified pen section,
53 **Hand and arm rests**
54 Traveling,
55 Book supported,
56 Adjustable height,
57 **Inkstands**
58 Desk attached,
59 Barometer,
60 Fountain
61 Automatic,
62 Compressible ink bag
63 Flexible diaphragm
64 Automatic,
65 Gravity feed,
66 Movable dip cup,
68 Self opening and closing,
67 Self-closing,
69 Supplementary reservoir,
70 Tilting reservoir,
71 Dip gauges,
72 Opening and closing devices,
73 Supports.
82 **Paper weights.**

120. STATIONERY—Continued.
83 **Pencils**
84 Attachments.
Pencil-sharpeners
Implements
85 Compound
86 Reciprocatory movement,
87 Point protectors,
88 Knife gauges,
89 Reciprocatory movement
90 Shaving,
91 Revolving pencil,
92 Rotary movement
93 Shaving,
94 Machines
95 Rotating cutter and pencil,
96 Rotating cutter.
97 **Pen extractors.**
98 **Penholders**
100 Angular adjustment,
101 Releasing,
102 Grips
103 Detachable,
104 Ink guards,
106 Slant devices
107 Supporting.
108 **Pen racks and cleaners.**
109 **Pens**
109.5 Drawing,
110 Ruling,
111 Shading,
112 Stylus,
113 Reservoir attachments
114 Nib attached
115 Integral.
116 **Sealing-wax appliers.**

121 MOTORS—EXPANSIBLE-CHAMBER TYPE.

1 **Miscellaneous.**
2 **Bell ringers.**
3 **Tool**
4 Rotating, feeding, and cleansing,
5 Rotating and feeding,
6 Rotating and cleansing,
7 Rotating,
8 Feeding and cleansing,
9 Feeding,
10 Cleansing,
11 Automatic starting or stopping,
12 Variable stroke,
13 Percussive
14 Jolting machines,
15 Multiple piston, cylinder, or expansion,
16 Fluid distribution
17 Valveless,
18 Semivalveless
19 Compression-actuated admission valve,
20 Independently power-actuated valve,
21 Manually actuated valve,
22 Fluid actuated angularly moving valve,
23 Pilot valved,
24 Relieved - pressure - actuated valve,
25 Piston-controlled valve
26 Returned by compression,
27 Returned by constant pressure,
28 For both movements,
29 Compression-actuated valve,
30 Mechanically actuated valve,
31 Cylinders and pistons,

121. MOTORS—EXPANSIBLE-CHAMBER TYPE—Continued.

Tool

Percussive
32 Tool retainers,
33 For rotary tools
34 Rotary cylinder or piston,
35 Inlet or exhaust control,
36 Handles or handle fastenings.

37 **Engine-starter type.**
38 **Servo-motor type**
39 Steam-engine type,
40 With locks,
41 With follow-up devices
42 Speed controlled,

43 Speed controlled,
44 For closures,
45 For carriages,
46 For hoists
46.4 Valves,
46.5 Valves.

47 **Stop devices.**
48 **Collapsible wall.**
49 **Alternating-piston type.**
50 **Moving cylinder**
51 Multiple expansion,
52 Transversely reciprocating cylinder and piston,
53 Rotating

54 Nonrotating piston
55 Swinging abutment,
56 Moving vane,
57 Sliding vane or abutment,
58 Reciprocating piston
59 Radiating cylinder
60 Outside thrust member
61 Cam,
62 Parallel or coaxial cylinder and rotation axes,

121. MOTORS—EXPANSIBLE-CHAMBER TYPE—Continued.

Moving cylinder

63 Oscillating
64 Rocker-type valve
65 End rocker.
66 **Nonreciprocating piston**
67 Rotary
68 Planetary movement
69 Inclined axis
69.5 Piston structure
70 Multiple,
71 Rotary abutment
72 Multiple expansion,

73 Sliding abutment
74 Multiple expansion,
75 Radially moving
76 Rotary-cam actuated,
77 Piston actuated,
78 Swinging abutment

79 Multiple expansion,
80 Spring actuated,
81 Fluid actuated,
82 Sliding vane

83 Multiple expansion,
84 Eccentrically walled chamber
85 Cam actuated,
86 Spring actuated,
87 Fluid actuated,
88 Axially centered,

89 Axially moving,
90 Cam actuated
91 Interposed lever,

92 Fluid actuated,
93 Swinging vane
94 Multiple expansion,
95 Spring actuated,
96 Fluid actuated.

121. MOTORS—EXPANSIBLE-CHAMBER TYPE—Continued.

Nonreciprocating piston

97 Oscillating
98 Multiple,
99 Winged.
100 **Multiple piston.**
101 **Valveless.**
102 **Multiple expansion**
103 Semicompound type
104 Automatic,
105 Convertible,
106 Duplex
107 Cut-off or reversing
108 With fluid-actuated valve,
109 Differential piston,
110 Concentric cylinders,
111 Cut-off or reversing,
112 Single acting,
113 Single valve.
114 **Duplex**
115 With fluid-actuated valve,
116 Combination-gear.
117 **With special transmission**
118 Compensating,
119 Piston parrallel or coaxial with shaft,
120 Pistons symmetrical with transverse shaft
121 Single valve.
122 **Pistons longitudinally arranged.**
123 **Valved piston.**
124 **Independent admission and exhaust**
125 Uniflow type,
126 Fluid-actuated valve,
127 Cam gear,
128 Trip gear.
129 **Valved cylinder.**
130 **Fluid distribution**
131 Compound-motion valve,

121. MOTORS—EXPANSIBLE-CHAMBER TYPE—Continued.

Fluid distribution

132 Cushioning or compression,
133 By-passing,
134 Pressure, condensate, or vacuum relief,
135 Exhaust
136 Auxiliary,
137 Drifting on auxiliary fluid,
138 Port reversing
139 Shifting distributing valve,
140 Shifting distributing-valve seat,
141 Selecting valve,
142 Admission
143 Throttling,
144 Independent cut-off
145 Reciporcating distributing valve
146 Slide or piston cut-off valve.

Special distributing-valve actuation

147 Independently power actuated,
148 Electrically acutated,
149 Pulsator actuated,
150 Fluid actuated
151 With modifiers,
152 Started
153 Transversely starting,
154 Pilot-controlled throwing,
155 Angularly moving,
156 Relieved pressure,
157 Pilot controlled
158 Fluid-actuated pilot,
159 Angularly moving pilot,
160 Transmission actuated
161 Fluid-influenced gear,
162 Power adjustment,
163 Combination gear,
164 Piston, rod, or cross-head actuated gear,

121. MOTORS—EXPANSIBLE-CHAMBER TYPE—Continued.

Special distributing-valve actuation
Transmission actuated
165 Engine-shaft-actuated gear
166 Cam gear
167 Rotary cam,
168 Trip gear,
169 Marshall-type gear,
170 Link gear,
171 With shifting eccentric pin
172 Automatic shift,
173 With shifting eccentric sheave.
174 Automatic shift
175 With modifiers
176 Sheave turned,
177 Sheave slide,
178 Sheave swung,
179 Rotary valve,
180 Oscillatory valve.
181 **With jacket or lagging.**
182 **With balanced valve**
183 Slide-valve type
184 Expansible.
185 **With puppet-type valve.**
186 **With oscillatory valve.**
187 **With rotary valve.**
188 **With sliding reciprocating valve**
189 Auxiliary port or grid valve,
190 Through port,
191 Internal supply or discharge,
192 Piston type
193 Cylindrical,
194 **Frames or casings.**

122 LIQUID HEATERS AND VAPORIZERS.

1 **Plants**
2 Garbage,
3 Motor vehicle.
4 **Miscellaneous.**
5 **Gas producer.**
5.5 **Air injected.**
6 **Industrial**
6.5 Port,
6.6 Tuyères
6.7 Forge,
7 Waste heat,
8 Water fire box
9 Water-tube type.
10 **For fluid-fuel burner.**
11 **Rotary.**
12 **Rotatably supported.**
13 **Stand boiler**
Fire tube and water tube
16 Fluid fuel,
Fire tube
17 Fluid fuel,
Water tube
Below boiler
18 Fluid fuel,
Casing
19 Fluid fuel,
14 Fluid fuel,
15 Solid fuel.
20 **Subsidiary.**
29 **Annular fire box.**
30 **Magazine.**
Indirectly heated
Separate fluid
31 Injected,
32 Surface
33 Furnace,
34 Separator.

122. LIQUID HEATERS AND VAPORIZERS—Continued.

35 **Accumulator.**
36 **Auxiliary steam heater.**
37 **Compartment**
Auxiliary
38 Draft regulator.
39 **Film.**
40 **Flasher**
41 Fluid fuel.
42 **Fire and water tube**
43 Fluid fuel.
44 **Fire tube**
49 Horizontal and vertical,
Horizontal or inclined
Water fire box
50 Flue,
51 Horizontal
52 Plural
53 Water tube,
Central fire box
54 Double outlet,
55 Cylinder,
Depending fire tube
56 Rear of bridge wall,
Double water fire box
57 Alternate smoke return
58 Drop water fire box
59 Circulation conduit,
Double
60 Alternate smoke return,
61 Drop water baffle,
62 Front and rear water baffle,
63 Front water baffle,
64 Interposed combustion chamber,
65 Rear water baffle,
66 Water coking chamber,
Water grate
67 Intermediate draft,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Fire tube
Horizontal
Drop water fire box
68 Water tube
Feed heater
69 Check valved,
70 Feeding air,
71 Solid baffle,
72 Projecting into fire box
73 Drop water fire box,
Return and reverse
74 Drop water fire box,
75 Return fire tube
76 Drop water fire box
77 Internal water tube,
Water fire box
78 Flue,
79 Subjacent water arch,
80 Subjacent flue,
81 Subjacent transverse fire tube,
Superjacent feed heater
82 In communication,
83 Transverse diaphragm,
Two diameters
84 Great diameter over fire box,
85 Small diameter over fire box
86 Water fire box,
87 U-coupling,
88 Upper drum,
Water arch
89 Rear of fire tube,
90 Water fire box
Fire box water heater
91 Trapped circuit,
92 Magazine,
93 Offset
94 Water-tube type,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Fire tube
Horizontal
Water fire box
Plural
95 Common combustion chamber.
96 Superposed,
Water grate
97 Downdraft,
98 Updraft,
Water tube
99 Straddle,
Water-tube type
100 Interposed flue,
101 Water smoke box,
Water tube
Horizontal
102 Over bridge wall,
103 Rear of fire tube,
Rearwardly declined
104 Over bridge wall,
Rearwardly inclined
105 Over bridge wall,
106 Water wall
107 Drop water fire box,
108 Subjacent water tube,
109 Inclined,
Transverse
110 Horizontal boiler,
111 Vertical boiler
112 Water fire box,
113 Water tube,
114 Vertical
116 Central fire dome,
117 Central magazine,
Circulation tube
118 Internal,
119 Cylinder,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Fire tube
Vertical
120 Offset fire box,
121 Return fire tube
122 Water fire box,
123 Separate compartment,
124 Side magazine,
125 Top water chamber,
126 Water fire box
127 Annular,
128 Central magazine,
Water grate,
129 Downdraft,
130 Water tube
131 Internal,
132 Radial loop,
133 Spur,
115 Fluid fuel,
134 Volute,
46 Magazine,
Flue
47 Horizontal,
48 Vertical,
45 Fluid fuel.
135 **Flue**
136 Horizontal
137 Plural
138 Water tube,
139 Drop water fire box,
140 Internal water tube
Longitudinal
141 Drop water fire box,
142 Return fire tube,
143 Spur,
144 Subjacent fire box,
145 Transverse
146 Drop water fire box,
147 Return fire tube,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Flue
Horizontal
Internal water tube
148 Water fire box,
149 Return fire tube
150 Rear water tube,
Water smoke box
151 Separate,
152 Water grate in flue,
153 Water tube
154 Over bridge wall,
155 Vertical
157 Central magazine
158 Water jacket,
Circulation tube
159 Internal,
160 Concentric shell
161 Fluid fuel,
162 Central magazine,
163 Exterior drum,
165 Internal water heater,
166 Internal water tube
168 Central magazine,
169 Coil
170 Header,
171 Contracted inlet,
172 Header,
173 Horizontal spur,
174 Internal fire tube,
175 Offset water fire box,
176 Transverse
177 Fluid fuel,
178 Vertical aligned fire tube
179 Fluid fuel,
180 Spur water tube,
181 Vertical spur,
167 Fluid fuel,
182 Return fire tube,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Flue
Vertical
Spiral water conduit
183 Fluid fuel,
Standpipe
Water tube
184 Annular fire box,
185 Loop,
186 Spur,
187 Transverse fire tube,
164 Insulated outlet flue,
156 Fluid fuel.

Horizontal cylinder
188 Drop water baffle,
Offset subjacent fire box
189 Water roof,
190 Water tube,
Subjacent fire tube
191 Beyond bridge wall,
192 Water bridge wall,
193 Water fire box,
194 Water tube type,
195 Water tube
Feed heater
196 Check valved,
197 Lateral longitudinal,
198 Lateral vertical
199 Fire box,
200 Over fuel grate,
201 Subjacent internal fire tube,
202 Trapped circuit,
Water grate
203 Downdraft,
204 Intermediate draft,
205 Multiple series,
206 Solid and water bar,
207 Updraft.

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Plate
Zigzag conduit
208 Fluid fuel.
209 Sectional
213 Plural fire box,
Horizontal sections
214 Superimposed
215 Central connection
216 Fluid fuel,
217 Water fire box,
218 Water fire box
219 Central magazine,
Water tube
Internal fire tube
220 Water fire box,
Vertical sections
221 Annularly posited
222 Central magazine,
223 Longitudinally posited
224 Casing,
225 Transversely posited
226 Casing
227 Divided section,
228 Divided section,
229 Water grate,
230 Two-section,
212 Magazine,
211 Fluid or solid fuel,
210 Fluid fuel,
232 Water grate,
231 Accessories.
Tank
233 Horizontal,
234 Vertical.
235 Water tube
238 Offset fire box,
239 Superimposed fire box,
240 Plural fire box,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Water tube
241 Fire box in drum,
242 Capillary
243 Fluid fuel,
Coil or loop
244 Central standpipe
245 Fluid fuel,
246 Annular fire box,
247 Coil
Horizontal
248 Fluid fuel,
249 Vertical
250 Fluid fuel,
251 Central magazine,
252 Water fire box,
253 Cross
254 Over bridge wall,
Over fire box
Longitudinal
Header
255 Drum,
Transverse
Header
256 Drum,
Transverse
Header
257 Drum
258 Downflow,
259 Drum type,
260 Flat
261 Volute,
262 Horizontal
263 Over bridge wall,
264 Over fire box,
265 Inclined,
266 Internal fire tube
267 Horizontal,
268 Inclined,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Water tube
Internal fire tube
269 Plural fire tube,
270 Straddle,
271 Vertical
272 Central magazine,
273 Longitudinal upper drum
274 Fluid fuel,
275 Loop
276 Fire-box inclosing,
277 Over bridge wall,
Over fire box
278 Cross,
279 Horizontal,
Rear of bridge wall
280 Bridge-wall header,
281 Standpipe,
282 Vertical
283 Fluid fuel,
Over bridge wall
284 Headers at right angles,
285 Transverse water baffle,
Water grate
286 Downdraft,
287 Intermediate draft,
Over fire box
288 Headers at right angles,
Water grate
289 Updraft,
Rearwardly declined
Over bridge wall
290 Front and rear header
291 Horizontal longitudinal drum
292 Fire-box tube,
293 Longitudinal water baffle,
294 Water wall,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Water tube
Rearwardly declined
Over bridge wall
Front and rear header
295 Internal water tube,
296 Longitudinal declined drum,
297 Transverse drum,
Over fire box
Front and rear header
298 Horizontal longitudinal drum,
299 Transverse drum,
300 Tubes beyond side wall,
Plural upper transverse drum
301 Plural lower transverse drum,
302 Single lower transverse drum,
Rearwardly inclined
Over fire box
Front and rear header
303 Transverse drum,
Separate banks
304 Opposite fire boxes,
305 Spur
306 Bridge-wall header
307 Central standpipe
308 Fluid fuel,
309 Annular fire box,
310 Central magazine,
311 Cross,
312 Horizontal longitudinal drum,
313 Over bridge wall,
Over fire box
314 Central header,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Water tube
Spur
Over fire box
315 Declined,
316 Horizontal,
317 Straddle,
318 Vertical
319 Fluid fuel,
320 Central magazine,
321 Standpipe
322 Fluid fuel,
323 Annular fire box,
324 Straddle
Plural upper drum
325 Plural lower drum
326 Cross,
Single upper drum
327 Plural lower drum
328 Fluid fuel,
329 Cross,
330 Plural fire box,
331 Transverse horizontal drum,
332 Vertical
333 Fluid fuel,
334 Side magazine,
335 Annular fire box,
336 Offset fire box
337 Elevated,
Annular lower drum
338 Annular upper drum
339 Central magazine,
340 Tubes over fire box,
341 Fire-tube upper drum,
342 Spur-tube upper drum,
343 Upper drum
344 Central magazine,
345 Beyond bridge wall
346 Gas return,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Water tube
Vertical
Beyond bridge wall
Longitudinal upper drum
347 Longitudinal lower drum,
Internal fire tube
348 Fluid fuel,
349 Over fire box
350 Gas return,
Plural upper longitudinal drum
351 Plural lower longitudinal drum,
Plural upper transverse drum
Plural lower transverse drum
352 Offset fire box.
353 Water grate
354 Downdraft,
355 Zigzag
356 Fluid fuel,
Over bridge wall
357 Longitudinal drum,
358 Transverse drum,
359 Over fire box,
237 Magazine,
236 Fluid fuel,
Headers
360 Closures and couplings
361 Cleaning,
362 Concentric tube,
363 Drum,
364 Tube closures,
365 Drums and couplings.
366 **Wick.**
367 **Heat transmitter.**

122. LIQUID HEATERS AND VAPORIZERS—Continued.

368 Water fire box
369 Mud ring,
370 Plural,
371 Water grate
Plural fire box
Superimposed
Water grate
372 Updraft,
373 Cage,
374 Grate structure
375 Solid and water bar,
376 Progressive feed,
Water fire box
Solid and water bar
377 Updraft,
378 Updraft.
21 **Chemical.**
22 **Fluid and solid fuel.**
23 **Fluid fuel**
24 Explosion,
Plural burner
25 Superimposed.
26 **Friction generator.**
Noncombustible heater
27 Surface,
28 Water in contact.
379 **Cleaning**
380 Agitating circulator,
Blow off
381 Bottom and surface,
382 Bottom
383 Internal conduit
384 Ejector,
385 Mud ring,
386 Pan,
387 Scraper,
388 Valved,
389 Surface exit,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Cleaning
390 Fluid jet
391 Horizontal fire-tube boiler,
392 Water-tube boiler,
393 Mud drum,
394 Pans,
395 Sand blast,
396 Systems,
397 Trapped circuit
398 Feeding water,
399 Surface and bottom exit,
400 Surface exit
401 Chemical feeder,
402 Circulating pump,
403 Feed heater,
404 Steam injector,
405 Washout nozzle.
406 Circulation
407 Injector,
408 Internal conduit
409 Horizontal flue boiler
410 Return fire tube,
Mechanical
411 Internal.
412 Feed heaters
413 Ash pan,
Boiler circuit
414 Feed injected,
Circulation
Surface exit
Mechanical pump
415 Feed injected,
417 Drip plate in boiler,
Fire-engine boiler
Auxiliary
418 Attached,
419 Detachable,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Feed heaters
420 Furnace gases
421 Offtake flue,
422 Furnace gases and steam,
Horizontal fire-tube boiler
423 Smoke box
424 Exhaust pipe,
425 Furnace gases and steam,
426 Water tube,
427 Smoke chamber,
428 Internal conduit
429 Automatic sediment valve,
430 Blow-off delivery,
431 Filter in boiler,
432 Furnace gases,
433 Trap outside boiler,
434 Locomotive tender,
435 Pan in steam space,
436 Spray,
437 Safety valve,
438 Spray to steam space,
439 Stack,
441 Steam
442 Injected
Superposed
443 Open to steam space,
444 Water-tube boiler.

Regulation
Fuel and water
446 Fluid fuel
447 Cut-off.
Automatic control
448 Fluid fuel,
449 Solid fuel,
450 Suspended boiler.
451 **Feeders**
Automatic
451.1 Thermally controlled

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Feeders
451.2 Pressure-operated valve,
452 Boiler pressure,
Gravity
456 Automatic
457 Heater,
458 Heater.
459 **Steam treatment**
460 Boilers with superheaters,
Fire-tube boiler
Horizontal
461 Superheater
In fire tube
462 From smoke box,
Interior steam space
463 Internal fire tube,
Smoke box
464 Fire tube
465 Steam tube,
466 Superheater and feed heater,
Vertical
467 Superheater,
Flue boiler
Vertical
Internal water tube
468 Superheater,
Horizontal boiler
Superheater
469 Rear of fire box,
470 Waste-heat flue,
Water-tube boiler
Declined over bridge wall
Front and rear header
Declined drum
471 Superheater,
Longitudinal drum
472 Superheater,

122. LIQUID HEATERS AND VAPORIZERS—Continued.

Steam treatment
Water-tube boiler
Longitudinal drum
473 Superheater,
Over bridge wall
474 Superheater,
Standpipe
Spur tube
475 Superheater,
Transverse drum
478 Superheater,
477 Superheater and feed heater,
476 Superheater,
Superheater
479 Automatic heat regulation,
480 Damper controlled,
481 Fire box,
482 Fire tube in steam space,
483 Indirectly heated,
484 Separate charges,
485 Separate furnace,
486 Steam dome,
487 Water injected.

Separators
488 Boiler circulation,
489 Boiler return,
490 For tilting boilers,
491 Interior of boiler.
492 Steam dome.
493 **Braces and stays.**
494 **Casings.**
495 **Crown-sheet protecting.**
496 **Crown sheets and stays.**
497 **Fronts**
498 Doors,
499 Mouths
500 Water fire box.

122. LIQUID HEATERS AND VAPORIZERS—Continued.

501 **Fluid displacer**
502 Fluid fuel.
503 **Fuel Baffles.**
504 **Safety devices**
504.1 Fusible control,
504.2 Alarms or indicators,
Fire extinguishers
504.3 Fusible control,
505 Float controlled,
506 Pressure controlled,
507 Self-closing valve.
508 **Steam domes.**
509 **Submerged steam chamber.**
510 **Supports.**
511 **Tubes and connections.**
512 **Tube sheets.**

123 INTERNAL-COMBUSTION ENGINES.

1 **Miscellaneous.**
2 **Combined devices**
3 Generating plants.
7 **Hammers.**
8 **Rotary**
11 Alternating pistons,
12 Geared pistons,
13 Rotating abutment
14 Sliding abutment,
15 Swinging abutment,
16 Sliding piston,
17 Swinging piston.
18 **Oscillating piston.**
19 **Liquid piston.**
21 **Convertible cycle.**
22 **Internal combustion and air.**
23 **Solid fuel.**
24 **Gunpowder.**
25 **Water and hydrocarbon.**
26 **Additional air supply.**
27 **Burning by highly compressed air.**
Oil engines
Pump supply to air inlet
28 Four-cycle,
29 Two-cycle,
30 Internal vaporizing
31 Four-cycle,
32 Forced oil supply,
33 Oil atomizing,
34 External vaporizing
35 Four-cycle.
37 **Multiple explosion.**
38 **Atmospheric.**
39 **Noncompression.**
41 **Reversible.**
42 **Oscillating cylinder.**
43 **Rotating cylinder**
44 Radial.

123. INTERNAL-COMBUSTION ENGINES—Continued.

45 **Rotary reciprocating piston.**
46 **Free piston.**
47 **Valved piston.**
48 **Adjustable combustion chamber.**
50 **Reciprocating cylinder.**
51 **Multiple piston.**
52 **Multiple cylinder**
53 Simultaneous expansion,
54 Cylinders offset,
55 Cylinders radiating,
56 Cylinders opposite,
57 Cylinders tandem,
58 Cylinders parallel,
59 Cylinders longitudinal
60 Cranks coincident.
Double-acting
61 Two-cycle
62 Combined pump and motor cylinder,
63 Four-cycle.
64 **Six-cycle.**
65 **Two-cycle**
66 Combined pump and motor cylinder,
67 Divided pump discharge,
68 Pump compression,
69 Separate air and gas pumps,
70 Pump and cylinder adjacent,
71 Pump and cylinder coaxial,
72 Pump and cylinder inclined,
Rear compression
73 Crank case,
74 Cylinder.
75 **Four-cycle**
76 Scavenging,
77 Single revolution,
78 Variable clearance,
79 Single puppet valve,
80 Rotating valve,

123. INTERNAL-COMBUSTION ENGINES—Continued.

Four-cycle
81 Oscillating valve,
82 Rotating side shaft,
83 Rotating transverse shaft,
84 Adjacent supply and exhaust valves,
85 Aligned supply and exhaust valves,
86 Opposite supply and exhaust valves,
87 Longitudinal valve and lever,
88 Transverse valve and lever,
89 Transverse valve and bell crank.
97 **Speed regulators**
98 Manually controlled,
99 Combined types
100 Charge volume and proportion varying,
101 Charge varying and omitting,
102 Electrical,
103 Pneumatic,
104 Supply-pump regulating,
105 Charge rejecting,
106 Charge-proportion varying
107 Exhaust regulating,
Charge-volume varying
108 Throttling,
109 Supply-valve lift regulating,
110 Automatic cut-off,
Charge omitting
Centrifugal governor
111 Supply and exhaust valve regulating,
112 Supply-valve regulating,
113 Exhaust-valve regulating,
Inertia governor
114 Supply and exhaust valve regulating,
115 Supply-valve regulating,
116 Exhaust-valve regulating,

123. INTERNAL-COMBUSTION ENGINES—Continued.

Speed regulators
117 Automatically controlled igniting device,
118 Ignition omitting.
90 **Valve-operating mechanism**
91 Four-cycle
92 Pneumatic,
93 Double-loop cam,
94 Intermittently operated cam,
95 Intermittently operated tappet,
96 Two-to-one gearing.
143 **Igniters**
144 Flame,
145 Incandescent
146 Valve controlled,
146.5 Sparkers
147 Low tension,
148 High tension,
149 Dynamos,
150 Combined adjusting and exhaust regulating,
151 Combined sparker and valve,
152 Combined valve and sparker operating,
169 Plugs,
153 Make and break
154 Electromagnetic,
155 Pneumatic,
162 Piston operated,
156 Reciprocating electrode,
157 Rocking-electrode hammer action,
158 Rocking and rigid electrodes,
159 Rocking and yielding electrodes,
160 Oscillating electrodes,
161 Rotary electrode,
163 Stationary-electrode structure,
164 Adjusting mechanism.

123. INTERNAL-COMBUSTION ENGINES—Continued.

192 **Compensating devices.**
197 **Transmission mechanism.**
179 **Starting devices**
180 Combustible-mixture supply,
187.5 Primers,
183 Gunpowder,
182 Compression relieving,
185 Mechanical
186 Spark delaying,
184 Igniters.
119 **Charge-forming devices**
123 Governor controlled,
121 Combined oil and gas,
120 Gas and air mixers,
124 Automatic dilution,
127 Multiple oil supply,
128 Constant oil supply,
125 Oil intercepting,
129 Valve-controlled oil
130 Positively operated,
131 Atomizers
132 Constant level,
133 Oil evaporating
134 Submerged air supply,
135 Extended oil film,
122 Heating.
136 Oil feeding
137 Reciprocating,
138 Rotary,
139 Pumps
140 Governor controlled,
126 Movable carrier,
141 Mixing devices,
142 Safety devices.
142.5 **With heating means**
170 **Cooling**
171 Air cooled,
172 Combined packing and cooling,

123. INTERNAL-COMBUSTION ENGINES—Continued.

Cooling.
173 Cylinder, jacket, and head construction,
174 Heat-dissipating devices,
175 Liquid-impelling devices,
176 Rod and piston,
177 Valve,
178 Temperature regulators,
178.5 Thawing.
191 **Combustion chambers.**
193 **Cylinder and piston construction.**
188 **Valves**
189 Detachable,
190 Rotary.
195 **Frame construction.**
196 **Lubricators.**
198 **Accessories.**

124 MECHANICAL GUNS AND PROJECTORS.

1 **Miscellaneous.**
2 **Combined with cap exploder.**
3 **Electromagnetic.**
4 **Centrifugal.**
5 Hand,
6 Mechanical
7 Spring
8 Rotating about vertical axis
9 Automatically varied throwing angle.
10 **Pinch.**
11 **Fluid pressure**
12 Blow guns,

124. MECHANICAL GUNS AND PROJECTORS—Continued.

Fluid pressure.
13 Self-contained plunger compressor
14 Spring driven
15 With reduced projectile barrel.
16 **Spring**
17 Elastic band
18 Self-projected band
19 Repeating
20 Crotch type,
21 Guided projectile
22 Dart or arrow projectors.
23 Bows
24 With projectile guides
25 Cross-bows,
26 Guided projectile
27 Gun type
28 Converted firearms,
29 Mounted.
30 **Elements**
31 Trigger and releasing mechanism
32 Electrical,
33 Chance operated,
34 Remote,
35 Cord or band release,
36 Swinging arm release,
37 Plunger release
38 Variable force,
39 Continuous firing,
40 Safety locks,
41 Projectile holders and carriers
42 Disk
43 Disk target clips and carriers,
44 Boomerang,
45 Magazines
46 Disk target
47 Gravity fed,
48 Rotary,

124. MECHANICAL GUNS AND PROJECTORS—Continued.

Elements.
Magazines.
49 Gravity fed
50 With cut-off,
51 Mechanically fed
52 Spring
53 With cut-off.

125 STONE WORKING.

1 **Miscellaneous.**
2 **Dressing**
3 Rotary cutter
4 Cutter-support feed,
5 Rotary tools,
6 Pick-action cutter
7 Cutter-support feed,
8 Arm-supported tool.
9 **Planing.**
10 **Turning**
11 Grinding-wheel dressing.
12 **Sawing**
13 Rotary
14 Saw-support feed,
15 Saw blades,
16 Reciprocating
17 Saw racks,
18 Saw blades,
19 Oscillating,
20 Disk cutting,
21 Endless,
22 Saw teeth.
23 **Splitting, shearing, and punching**
24 Mica splitting.
25 **Slate surfacing.**

125. STONE WORKING—Continued.
26 Brick cleaning.
27 Millstone dressing
28 Rotary cutter
29 Pick-action cutter.
30 Precious-stone working.
31 Pulsator hammers
32 Piston driven.
33 Hammer
34 Piston driven.
35 Work supports.
36 Tools
37 Traction rotated,
38 Surface traversing
39 Diamond,
40 Impact
41 Bush hammers and chisels,
42 Millstone picks,
43 Miners' picks.

126 STOVE. AND FURNACES

204 Body warmers
205 Bed heaters,
207 Heated block.
206 Composition fuel,
208 Liquid or gaseous fuel
209 Combined heater and lantern,
210 Water heater.
226 Tool heaters
236 Soldering iron
237 Gas heaters
238 Tool-controlled valve,
239 Liquid fuel
240 Combined heater and solder pot,
241 Lamp,

126. STOVES AND FURNACES—Con.
Tool heaters.
229 Liquid or gaseous fuel.
231 Gas-burner attachments
232 Combined lighting and heating,
233 Jet mixer,
234 Tool-controlled valve,
235 Lamp attachments,
230 Flatiron,
227 Flatiron
228 Attachments.
284 Glue pots.
281 Dough raisers
282 Lamp type.
343.5 Melting furnaces.
344 Water heaters
345 Kettle furnace
346 Canning,
348 Steam generators and cookers,
349 Tilting,
347 Horizontal combustion chamber,
369 Steaming apparatus
369.1 With additional heating fluid,
369.2 Plural steam chambers
369.3 Selective supply,
361 Stand boilers
362 Circulation,
363 Supports,
364 Stovepipe
365 Circulation,
Submerged
367 Portable,
366 Closed systems pipes,
368 Stationary,
373 Vessels
374 With automatic control,
375 With heat accumulator,
376 Fluid heated
377 Steam or water heated
378 Closed chamber or coil,
379 Jet,

126. STOVES AND FURNACES—Con.
Water heaters.
Vessels.
380 With liquid supply,
381 With condenser
382 Condensing liquid,
383 Overflow directors or receptors
384 In vessel closure,
385 Annular receptor
386 With return,
387 With heat type agitator or circulator,
388 With signal or indicator,
389 With vent passage,
390 Heating surface construction and arrangement
391 Fire tube type,
392 Water tube type,
350 Liquid or gaseous fuel
351 Automatic,
355 Drip plate,
357 Hinged or separable,
358 Lamp type,
359 Overflow,
360 Submerged.
Heaters
263 Chemical,
246 Dish,
269 Powder,
261 Lunch
268 Wagon,
265 Liquid or gaseous fuel
266 Dinner buckets
267 Combined bucket and lantern,
262 Combined can and heater,
271.1 Surface
271.2 Fluid fuel,
271.3 Solid fuel,
270 Solar
271 Water,

126. STOVES AND FURNACES—Con.
Heaters.
247 Frictional,
Liquid or gaseous fuel
Attachments
248 Drum,
249 Gas jet
254 Combined,
252 Article support
253 Jet mixer,
250 Air
251 Jet mixer,
255 Lamp
Chimney heaters
258 Article support,
257 Air,
Stands
260 Article support,
259 Air heaters,
256 Article support.
Trash burners
222 Cooking stoves
223 Feeding attachments
225 Heating stoves,
224 Domestic-refuse burners.
120 Fireplaces
121 Hot air
122 Two-room heaters,
123 Stove structure
124 Magazine,
125 Two-room direct radiation,
126 Stove structure,
132 Water backs
133 Liquid or gaseous fuel,
127 Liquid or gaseous fuel
128 Asbestos fireback
129 Hot air,
130 Firebacks
131 Hot air,
135 Blowers
136 Stove structure.

126. STOVES AND FURNACES—Con.

Fireplaces
137 Cooking and oven attachments,
138 Fronts
139 Frames,
140 Grate closure,
141 Heat reflector,
142 Hoods,
143 Hearths,
134 Air-moistening attachments.
99 Hot-air furnaces
100 Combined with cooking stove,
101 Combined with boiler,
110 Compressed air,
111 Double fire pot,
116 Liquid or gaseous fuel,
117 Preliminary air heater,
106 Internal air chamber,
108 Secondary heating chamber horizontally arranged,
109 Tubular air heater,
107 Magazine,
104 Horizontal combustion chamber,
102 Circular radiating drum,
103 Downdraft,
112 Feeding air,
113 Air moisteners,
114 Casings,
115 Dust flue,
105 Hot-air equalizers,
118 Radiating flanges,
119 Joints.
Stoves
1 Cooking
24 Ship's galley,
25 Summer
29 Field
30 Supporting frame,
27 Stove top supported
28 Stove flue connected,

126. STOVES AND FURNACES—Con.

Stoves
Cooking
Summer
26 Detachable fire pot,
9 Knockdown or separable,
4 Combined cooking and heating stove
5 Steam or water generators,
6 Air heating,
7 Magazine,
8 Brick set,
23 Reversible,
2 Double fire pot
3 Cooking and heating,
10 Magazine
11 Portable,
33 Tables, steam heated,
55 Combined base and hot closet,
Liquid or gaseous fuel
38 Folding or nesting kit,
37 Cabinet,
36 Combined coal and gas,
52 Valve mechanism, article controlled,
53 Water backs
54 Combined burner and water back,
39 Gas
41 Broilers,
40 Burner stands,
42 Safety attachments,
Liquid
43 Alcohol,
44 Vaper,
45 Wick
46 Extension top,
47 Lamp type
48 Combined top, chimney and burner,

126. STOVES AND FURNACES—Con.

Stoves
Cooking
Liquid or gaseous fuel
Liquid
Wick
49 Reservoir supporting top and burner,
50 Supporting frame.
51 Drip pan or receptacle,
15 Feeding air,
16 Flue cleaners,
Elevated ovens
17 Smoke pipe heated,
18 Top plate supported,
19 Ovens
20 Steam or hot water,
21 Ventilated,
22 Protector plate,
34 Water backs
35 Safety devices,
Water heating
31 Flue extension,
12 Hearths
13 Firepot,
14 Broiling attachments,
32 Spittoon attachments,
56 Car
57 Protective casings,
58 Heating
59 Camp,
59.5 Orchard,
60 Horizontal body
61 Hot air,
62 Open front
63 Hot air,
64 Panel,
65 Sheet metal
66 Hot air,
79 Smoke and gas returning,

126. STOVES AND FURNACES—Con.

Stoves
Heating
Liquid or gaseous fuel
84 Combined heating and ventilating,
85 Gas
91 Radiator type,
86 Open front
87 Asbestos fireback
88 Hot air,
89 Hot air,
90 Hot air,
92 Incandescent fire grate,
93 Liquid
94 Flue connected,
95 Vapor,
96 Wick
97 Heating and illuminating,
67 Hot air
68 Magazine,
69 Revertible draft, base heating,
72 Tubular air heaters,
70 Internal air chamber,
71 Central air tube,
73 Magazine
74 Revertible draft, base heating,
75 Revertible draft, base heating,
76 Downdraft,
77 Feeding air,
78 Feeding steam,
80 Ventilating attachments,
81 Stove plates,
82 Adjustable pipe collar,
83 Deflector plate,
98 Joints.
Ovens
273 Domestic
274 Dutch,
275 Portable,

126. STOVES AND FURNACES—Con.

Ovens
276 Wagon.
144 Fire pots and linings
Rotary
149 Horizontal axis,
150 Vertical axis,
145 Adjustable,
146 Feeding air,
147 Divided,
151 Sectional,
148 Fire plate.
242 Ash discharge and collecting
245 Combined stove and ash pan,
243 Ash pans
244 Sifting.
211 Stove lids and tops
217 Heating stove
218 Cooking attachments,
219 Ornaments and urns,
213 Illuminating,
214 Liquid or gaseous fuel
215 Elevating support,
216 Extension top,
212 Centers or cross pieces,
220 Lids,
221 Stove mats.
190 Stove doors and windows
198 Oven doors, ventilating,
193 Feeding air,
191 Balanced,
Latches
197 Combined latch and operator,
192 Door operator,
194 Hinges,
195 Knobs,

200 Transparent panel.
332 Stove shelves
336 Fire place grate,

126. STOVES AND FURNACES—Con.

Stove shelves
337 Oven shelf or rack
338 Rotary,
339 Sliding
340 Door operated,
334 Drop
335 Door operated,
333 Brackets or stands.
285 Dampers
286 Distance operating devices
287 Door operated,
287.5 Fusible release,
288 Fireplace,
289 Stove
290 Draft,
291 Repair,
292 Stovepipe
293 Combined damper and ventilator,
295 Lock and indicator,
296 Multiple,
297 Sinuous passage,
294 Cone.
152 Grates
164 Fireplace
165 Basket,
163 Feeding air,
153 Adjustable
154 Vertically,
160 Closures,
166 Fuel cut-off,
161 Cut-off,
Rotary
181 Horizontal axis,
182 Vertical axis,
Oscillatory
170 Vertical axis
171 Dumping section,
172 Sliding section,

126. STOVES AND FURNACES—Con.

Grates
176 Rocking bar
177 Dumping,
178 Duplex,
179 Grate bar
180 Removing fuel support,
174 Reciprocating
175 Alternate bar,
155 Agitating
159 Pocket,
158 Dumping,
156 Alternate ends,
157 Alternate bar,
162 Dumping,
167 Grate bar
168 Removable fuel support,
169 Operating mechanism,
173 Raking attachments.
299 Stove hoods
300 Stove discharge,
301 Stovepipe discharge
302 Stove casing,
303 Top plate casing.
307 Stovepipes
312 Ventilation,
313 Air-moistening attachments.
314 Stovepipe thimbles
316 Combined thimble and ventilator,
315 Adjustable flue collar,
318 Stovepipe anchor or lock,
319 Flue stoppers,
317 Floor or ceiling plates.
280 Soot catchers.
201 Fenders
202 Fire screen or guard,
203 Fireplace hearth.
208 Fire dogs.

126. STOVES AND FURNACES—Con.

277 Platforms
278 Stove boards
279 Ventilating.
304 Stove legs
305 Base supports,
306 Sheet metal.
283 Fuel boxes.

127 SUGAR, STARCH, AND CARBOHYDRATES.

Apparatus

1 Hydrolyzing,
2 Treating sacchariferous material
3 Leaching or diffusion
4 Combined disintegrator,
5 Advancing solid material
6 Multiple stage,
7 Tubular cell,
8 Diffusion batteries,
9 Treating sacchariferous solutions
10 Dialyzers,
11 Defecating apparatus
12 Gas and liquid contact,
13 Separating tanks,
14 Mixing tanks,
15 Forming crystals
16 Concentrating and crystallizing,
17 Treating crystals
18 Purging and molding
19 Centrifugal,
20 Purging,
21 Granulating and mixing,
22 Melting or dissolving,
23 Treating amylaceous material
24 Separating and purifying
25 Screens or washers,
26 Tables,
27 Decanters or settling tanks,
28 Cookers.

Products

29 Miscellaneous,
30 Sugars only
31 Lactose,
32 Modified starches
33 Added chemical.

127. SUGAR, STARCH, AND CARBOHYDRATES—Continued.

Processes

34 Carbohydrate manufacture and refining
36 Hydrolysis of carbohydrates
37 Cellulose material,
38 Amylaceous material
39 With preliminary purification of starch,
40 With purification of product,
41 Inversion of sucrose,
42 Sugar manufacture and refining
43 Extracting from solid material
44 Chemical treatment,
45 Counterflow,
46 Treatment of sacchariferous solutions
47 Chemical precipitation of sucrose,
48 Chemical precipitation of impurities
49 Impregnated absorbent,
50 Alkaline reagent followed by precipitant,
51 Acid reagent followed by precipitant,
52 Gassing,
53 Physical separation of impurities
54 Dialysis,
55 Filtering or absorption,
56 Centrifuging,
57 Settling or flotation,
58 Crystallizing or solidifying
59 Molding,
60 Seeding,

127. SUGAR, STARCH, AND CARBOHYDRATES—Continued.

Processes

Carbohydrate manufacture and refining
Sugar manufacture and refining
Treatment of sacchariferous solutions
Crystallizing or solidifying
61 Evaporating to crystallization
62 Return of intermediate products,
63 Treating solid sugar or crystals
64 Purging or bleaching,
65 Starch manufacture and refining
66 Tubers,
67 Treatment of starch-bearing material
68 Steeping,
69 Treatment of amylaceous liquids
70 Chemical,
71 Treating starch.

128 SURGERY.

1 **Miscellaneous.**
1.1 **Radioactive substances**
1.2 Seeds and holders.

128. SURGERY—Continued.

1.3 **Magnetic**
1.4 Probes,
1.5 Wire coil.
2 **Diagnostics**
2.05 Cardiac,
2.06 Electrocardiographs,
2.08 Spirometers,
2.1 Electric,
3 Specula
4 Endoscopes
5 Fenestrated,
6 Illuminating
7 Cystoscopes and urethroscopes,
8 Gastroscopes,
9 Otoscopes,
10 Pharyngoscopes
11 Illuminating,
12 Nonpivoted gags
13 Illuminating,
14 Veterinary,
15 Tongue depressors
16 Illuminating,
17 Pivoted
18 Illuminating,
19 Veterinary,
20 Retractors,
21 Reflectors
22 Illuminating,
23 Lamps
24 **Kinesitherapy**
24.1 With light, thermal and electrical application
24.2 Appliances with applicators having specific movement
24.3 Rolling
24.4 Electrical application,
24.5 Electrical application,

128. SURGERY—Continued.

Kinesitherapy

25 Exercising appliances
26 Hand and finger,
27 Lung
28 Artificial respiration
29 Forced inhalation,
30 Produced by vacuum and compression
31 Obstetric,
32 Vibrators
33 Couch, chair, or other support,
34 Unbalanced weight
35 Motor operated
36 Electric motor,
37 Fluid motor,
38 Fluctuating fluid column
39 Diaphragm actuated,
40 Pressure interrupted,
41 Vibrant armature,
42 Reciprocating weight,
43 Vibrant slide,
44 Appliances with applicators having specific movement
45 Gyratory, motor operated
46 Electric motor,
47 Fluid motor,
48 Oscillatory, motor operated
49 Electric motor,
50 Fluid motor,
51 Reciprocatory, motor operated
52 Electric motor,
53 Fluid motor,
54 Percussing
55 Motor operated,
56 Rotary,
57 Rolling
58 Belt supported,
59 Pinching,

128. SURGERY—Continued.

Kinesitherapy

Appliances with applicators having specific movement
60 Kneading,
61 Manipulating,
62 Frictioning
63 Belt,
64 Vibrant membrane,
65 Lavative
66 Fluid current,
67 Applicators.
68 **Orthopedics**
68.1 With light, thermal and electrical application,
69 Osteal adjusters
70 Couches
71 Extension,
72 Gap intermediate the ends
73 Pivoted to pedestal,
74 Pivoted intermediate the ends,
75 Extension appliances,
76 Head
76.5 Eye,
77 Arm and hand,
78 Body,
79 Genital,
80 Leg and foot
81 Toe.
82 **Bandaging**
82.1 With light, thermal and electrical application,
83 Fracture apparatus
84 Extension appliances
85 Splints
86 Box,
87 Splints
88 Hinged,

128. SURGERY—Continued.

Bandaging

Fracture apparatus
Splints
89 Shaped and shapable
90 Plastic
91 Plaster of Paris,
92 Bone,
93 Box,
94 Slings,
95 Trusses
96 Abdominal,
97 Head,
98 Perineal,
99 Supports
100 Belt wholly flexible
101 Elastic in part,
102 Belt and frame,
103 Frame hinged,
104 Frame wholly metallic,
105 Frame with auxiliary straps,
106 Pad carriers
107 Detachable,
108 Pivoted
109 Resilient,
110 Clamped,
111 Resilient,
112 Pads
113 Composition,
114 Medicating,
115 Rigid,
116 Adjustable center,
117 Resilient
118 Inflated,
119 Spring,
120 Stuffed,
121 Connections
122 Ball and socket,

128. SURGERY—Continued.

Bandaging

Trusses
Connections
123 Hinged,
124 Clamped,
125 Resilient
126 Spring only,
127 Pessaries
128 External support,
129 Inflated,
130 Intrauterine
131 With cervical cup,
132 Shields
133 Restraints
134 Body
135 Supination,
136 Mouth
137 Stammering,
138 Sexual,
139 Breath deflectors,
140 Respirators
141 Masks
142 Air replenishing,
143 Forced circulation,
144 Combined with garment,
145 Fresh air,
146 Oronasal,
147 Oral,
148 Nasal,
149 Chafing
150 Nipple,
151 Ear
152 Antiphone,
153 Toe and foot,
154 Vaccination,
155 Bandages
156 Material and making,
157 Member inclosing

128. SURGERY—Continued.
Bandaging
Bandages
Member inclosing
158 Suspensory
159 Garment attached,
160 Compressive,
161 Separable sack,
162 Sacks,
163 Head and face
164 Chin supporter,
165 Arm and leg
166 Ankle,
166.5 Arch,
167 Abdominal,
168 Perineal support,
169 Bands
170 Roller,
171 Retainers.
172 **Medicators**
172.1 With light and electrical application
172.2 Syringes,
173 Atomizers
173.1 Multiple fluid,
173.2 Steam,
173.3 With tongue depressors,
184 Gas injectors and ejectors,
185 Inhalers
186 Vaporizers
187 Air impregnators,
188 Anesthetic feeder,
189 Ammonia,
190 Ozonizer,
191 Regenerator,
192 Heated
193 Nebulizers,
194 Nebulizers,

128. SURGERY—Continued.
Medicators
Inhalers
Vaporizers
195 Oronasal
196 Mixers,
197 Mixers,
198 Nasal
199 Oral blowing tube,
200 Tubular,
201 Oral,
202 Rebreathing-bag combination,
203 Gas-holder combination,
204 Pressure-varying chamber,
205 Oronasal,
206 Nasal
207 Valved,
208 Oral,
209 Mixers
210 Valved,
211 Valved,
212 Thermal,
213 Dosing devices
214 Intravenous,
215 Hypodermic
216 Injectors
217 Pellet,
218 Piston
219 Expansible,
220 Tubular,
221 Cannula,
222 Oral
223 Veterinary,
224 Syringes
225 Fountain, air pressure
226 Body pressure,
227 Gravity pressure
228 Siphon,

128. SURGERY—Continued.
Medicators
Syringes
Fountain, air pressure
229 Hydrant pressure,
230 Pump
231 Bulb
232 Combined container and bulb,
233 Dropper,
234 Piston
235 Combined cylinder and reservoir,
236 Screw or rack,
237 Tubular,
238 Wide-mouth barrel,
239 Nozzles
240 Refluent
241 Occlusive,
242 Dilating
243 Expanding bow,
244 Expanding arm,
245 Occlusive
246 Inflatable,
247 Connections,
248 Douches
249 Eye,
250 Nasal,
251 Vaginal,
252 Nipples,
253 Vaccination,
254 Thermal
255 Internal application,
256 Vapor or air application
257 Air syringe,
258 Water bags,
260 Depositors and applicators

128. SURGERY—Continued.
Medicators
Depositors and applicators
261 Ointment depositors
262 Extroversive,
263 Tampon depositors,
264 Pellet depositors,
265 Powder depositors
266 Insufflators,
267 Stem,
268 Cataplasmic,
269 Swab
270 Tampon,
271 Suppository,
272 Containers or holders for solid, fluid, or gaseous substances,
273 Pumps,
274 Valves.
275 **Receptors**
275.1 With light, thermal and electrical application,
276 Aspirators
277 Air entraining,
278 Pump,
280 Lacteal
281 Pumps,
282 Cups,
283 Fecal,
284 Catamenial and diaper
285 Intravaginal,
286 With pouched receptacles,
287 Shields
288 Garment form,
289 Combined with belt supports,
290 Pads and pad holders,
291 Supporters,
292 Obstetric and surgical,
293 Sudatory,

128. SURGERY—Continued.

Receptors

294 Urethrorrhœal
295 Urinary,
296 Adsorbent pads and material,
297 Vacuum and plenum
298 Body inclosing,
299 Member inclosing,
300 Cups
301 Paired,
302 Vacuum device and scarifier combined.

303 Instruments

303.10 With light, thermal and electrical application
303.11 Dilators
303.12 Heat application,
303.13 Electrical application
303.14 Cutting
303.15 Endoscopic,
303.16 Tonsillotome,
303.17 Coagulation,
303.18 Needle,
303.19 Surgical needle supports,
304 Curettes and scrapers,
305 Cutters
306 Castrating,
307 Embryotome,
309 Tonsillotome,
310 Trephine,
311 Urethrotome,
312 Rongeur,
313 Snout,
314 Lancet
315 Scarificator,
316 Markers,
317 Saw,
318 Shear,

128. SURGERY—Continued.

Instruments

319 Crushers
320 Ecraseur,
321 Forceps
322 Artery,
323 Obstetric
324 Veterinary,
325 Hemostatic devices
326 Ligators
327 Tourniquets,
328 Lithotrites and other bladder instruments,
329 Puncturing,
330 Ring, tag, hair, etc., inserters
331 Ear,
332 Nose,
333 Scarifiers,
334 Suturation or wound-closing devices
335 Coaptators
335.5 Sutures and ligatures,
336 Hoof-crack devices,
337 Serre-fines,
339 Needles
340 Inserters,
341 Dilators
342 Nasal,
343 Tubular,
344 Inflatable,
345 Expanding arm,
346 Clamps,
347 Trocars,
348 Cannula
349 Catheter,
350 Drainage,
351 Tracheal,
352 Tractors, obstetric
353 Hook,

128. SURGERY—Continued.

Instruments

354 Tweezers,
355 Dermatological devices,
356 Probangs,
357 Brush,
358 Bougie,
359 Teething devices
360 Nipples,
361 Obstetric devices.

362 Light, thermal and electrical applications

363 Exercising
364 Push and pull,
365 Bathing apparatus
366 Shower baths,
367 Vapor baths
368 For body member,
369 Tubs
370 For body member,
371 Cabinets
372 Solar,
373 Recumbent,
374 Erect with head outside,
375 For body member,
376 Couches, beds, chairs, and seats
377 Chairs and seats
378 With current generator,
379 Body wear
380 Head, face and neck,
381 Hand,
382 Foot
383 Insoles,
384 Bands and belts
385 With attachments
386 Genital,
387 With current regulator,
388 With adjustable electrode,
389 With galvanic electrode,

128. SURGERY—Continued.

Light, thermal and electrical applications

Body wear
390 Plasters,
391 Battery elements
392 Link type,
393 Brushes and combs,
394 Canes and sticks,
395 Light applicators
396 Lamp and casing
397 With transparent rod,
398 Transparent rods,
399 Thermal applicators
400 With fluid supply,
401 Internal application,
402 Body member inclosing,
403 Thermal material receptacles,
404 Electric applicators
405 Cases with electrodes
406 Hand electrode,
407 Body orifice
408 Vaginal,
409 Ear, nose and mouth,
410 Head and eye,
411 Hand, foot and limb,
412 Male genital,
413 Condenser effect
414 Hollow electrode
415 Handles with sockets,
416 Flexible metal contact surface.
417 Contact surface wetting,
418 Body attaching,
419 Electrical systems
420 Combined circuits,
421 Pulsating and alternating
422 Oscillation circuits,
423 Circuit interruption
424 Magnetic vibrators,

129 PAPER FILES AND BINDERS.

1 **Miscellaneous.**
7 **Pins and punches.**
3 **Pins and indexes.**
14 **Followers and index partitions.**
15 **Indexes**
16 Card
16.1 Selective,
16.5 Systems,
16.7 Filing elements
16.8 Tabs.
2 **Continuous web.**
34 **Hinged-leaf supports.**
19 **Stubs and flaps.**
20 **Scrapbook and album leaves.**
8 **Pins and transfer wires**
9 Sliding base,
10 Swinging,
11 Tilting.
18 **Notched leaves.**
17 **Pins and hinged backs.**
12 **Projecting pins and covers.**
13 **Extensible pins and covers.**
25 **Binding wires.**
4 **Pins and followers**
5 Spring
6 Sliding.
21 **Pins**
22 Cord carrying,
23 Guarded,
24 Hinged.
42 **Transverse cords and leaf attachers.**
41 **Transverse cords.**
Fold engaging
38 Bars,
39 Cords,
40 Hooks.

129. PAPER FILES AND BINDERS—Continued.

26 **Followers**
27 Locking
28 Racks,
29 Lever-operated catch,
30 Spring-operated catch,
31 Tilting release,
32 Spring
33 Double acting.
35 **Clamping**
36 Parallel bars,
37 Spring-backs.
43 **File boxes.**

130 THRESHING.

1 **Band cutters and feeders.**
31 **Cane strippers.**
2 **Clover hullers,**
3 **Corncribs.**
4 **Corn-husking implements.**
5 **Corn-husking machines.**
Corn shellers
6 Breast and cylinder,
7 Disk action,
9 Ear grasping,
10 Implements,
8 Peripheral action.
33 **Feeders for shellers and huskers.**
13 **Flax threshers.**
Grain separators
Straw carriers
21 Endless aprons,
22 Overhung rakes,
23 Reels,
24 Shaking tables,
25 Vibrators,
26 Walking rakes.
14 **Granaries and bins.**
20 **Stackers.**
Threshing machines
27 Cylinder machines,
29 Dust conveyors,
28 Flail machines.
30 **Vine and seed strippers,**

131 TOBACCO.

1 **Products**
2 Tobacco substitutes,
3 Pipe cartridges,
4 Combined
5 Plug tobacco
6 With identifying markings, labels, or tags,
7 With ignition facilitating means,
8 Cigars and cigarettes
9 With smoke treating means
10 Traps, filters and/or absorbents,
11 End structure
12 Coated or impregnated,
13 Filler penetrating,
14 Blanks and fillers,
15 Wrappers or binders,
16 Shapes,
17 Tobacco compositions.
20 **Cigar and cigarette making**
21 With automatic control
22 Weight,
23 Combined
24 With printing or coating,
25 With collecting, arranging, packing, or packaging,
26 Sectional, alternate release and engage type,
27 Cooperating rolling surfaces
28 Combined
29 With tip or mouthpiece applier or former
30 With stationary smoother,
31 With tobacco treatment,
32 With subsequent wrapping or forming operations,
33 With wrapper cutter
34 Continuous wrapper,
35 With adhesive supply or applier,

131. TOBACCO—Continued.
Cigar and cigarette making
Cooperating rolling surfaces
Combined
36 With pre-cut wrapper feed and/or holder or , moother,
37 With adhesive supply or applier,
38 With filler tobacco or bunch feeder
39 With plural feed,
40 With bunch separator
41 With bunch pre-compressor
42 Ribbon feed,
43 Table mold,
44 With hopper discharger,
45 With bunch pre-compressor,
46 With end trimmer or completed article cutter,
47 Apron type
48 With moving table
49 Rotating or oscillating table,
50 With stationary table
51 With movable roll type member
52 Swinging roll support
53 Vertical axis,
54 Aprons,
55 Belt type,
56 Roller type,
57 Rollers,
58 Wrapping devices
59 Spirally wound continuous wrapper,
60 Longitudinally fed continuous wrapper
61 With tip or mouthpiece applier or former,
62 With tobacco treatment
63 With completed article cutter
64 With tobacco rod pre-shaper,

131. TOBACCO—Continued.
Cigar and cigarette making
Wrapping devices
Longitudinally fed continuous wrapper
65 With completed article cutter,
66 With tobacco rod pre-shaper,
67 With wrapper sealing
68 With heating means,
69 With adhesive supply or applier,
70 Tube filling type
71 With tip or mouthpiece applier or former
72 Plug inserting,
73 With tube making,
74 With hopper feed of tubes,
75 Mold with encircling wrapper tube,
76 With tip or mouthpiece applier or former,
77 Molding or forming
78 Combined
79 With tobacco treatment,
80 With plural molding or forming,
81 With tobacco or bunch feed,
82 With bunch remover and/or transfer,
83 With trimmer and/or end perforator or slitter,
84 Continuous rod or ribbon formers,
85 Molds
86 Plural
87 Rotary or endless carrier,
88 Tip or mouthpiece applying or forming
89 End tucker, ıolder, crimper, smoother
90 With adhesive supply or applier,
91 With cutter or trimmer,

131. TOBACCO—Continued.
Cigar and cigarette making
Tip or mouthpiece applying or forming
End tucker, folder, crimper, smoother
92 With heater and/or end punch,
93 Rotating type,
94 Plug attaching or inserting,
95 Sheet material tip,
96 Recovery of tobacco from cigarettes and cigars,
97 Wrapper cutters
98 Die
99 With leaf feeding or booking,
100 With suction die or holder
101 With presser roll
102 On pivoted sweep arm,
103 With presser roll
104 On pivoted sweep arm,
105 Wrapper holders and carriers,
106 Cigar tagging or labeling,
107 Bundling,
108 Tobacco feeding
109 With brushing, carding, or picking rolls,
110 With separator or suction device.
111 **Plug or compressed shape making**
112 Packing or bundling
113 Tagging or labeling
114 With tag or label making,
115 Turret type,
116 Continuous sheet type
117 With cutting,
118 With cutting,
119 Molds.
120 **Tobacco treatment**
121 With electrical or radiant energy,

131. TOBACCO—Continued.

Tobacco treatment

122 Stemming
123 With leaf smoothing or cleaning
124 With booking
125 Rotary or endless cutter,
126 With supplemental butt or stem cleaning,
127 By fluid blast or current,
128 Tearing type
129 With transverse stem cutting,
130 Card clothing type,
131 Cutting type
132 Stem die type,
133 With fluids or fluent material
134 With fluid circulating means
135 With automatic temperature and/or humidity control,
136 With tobacco conveying means,
137 Rotary drum type,
138 With tobacco conveying means
139 And expressing rolls,
140 Processes
141 With ferment-containing fluids,
142 With bleaching or sterilizing material,
143 With extraction or absorption,
144 With fluent flavoring material,
145 Leaf disintegrating
146 With separating,
147 Smoothing, brushing, rolling, stem crushing, or flattening
148 Booking type,
149 Leaf associating or disassociating.
170 **Tobacco users' appliances**
171 Smoking devices
172 Manufacturing processes and apparatus,
173 Smoke washing type,

131. TOBACCO—Continued.

Tobacco users' appliances

Smoking devices
174 Wind or ash guarding or ash receiving
175 Cigar or cigarette holders,
176 Pipe covers
177 With tamper or tamper type,
178 Combined or convertible
179 Plural smoking devices,
180 With storage means, feeder, and/or plural bowl
181 Follower,
182 With ejector
183 Tobacco support type,
184 With cleaner, stirrer or tamper,
185 With igniter and/or match scratcher,
186 With support,
187 Cigar and cigarette holders
188 With piercing device
189 Smoke conducting,
190 With movable gripper or holder,
191 Tubes,
192 Foldable or collapsible,
193 Base burner type,
194 Heat exchanging and/or insulating
195 Cooling air passages,
196 Spaced inner bowl
197 Plural reversely extending passages,
198 Special air inlets,
199 Longitudinally divided,
200 Smoke treating
201 Material traps only
202 Filter and/or absorber
203 Absorber only (no filtering)
204 Lined or coated bowls or stems,

131. TOBACCO—Continued.

Tobacco users' appliances

Smoking devices
Smoke treating
Material traps only
Filter and/or absorber
205 Tobacco supports
206 With valve or external passage closure,
207 Absorbent (or particulate),
208 Materials and/or forms,
209 Spiral passage,
210 Serial checks or baffles,
211 Chamber enclosed tubes or nipples
212 Overlapping, smoke direction changing,
213 Plural reversely extending passages,
214 Bowl detachable from neck cup,
215 With valve or external passage closure,
216 Special smoke passages
217 Spiral passage,
218 Plural reversely extending,
219 Lined or coated
220 Bowl,
221 Reversible bowl,
222 Bowl detachable from neck cup,
223 With valve or external passage closure,
224 Tobacco supports,
225 Joints and connections,
226 Bowls,
227 Stems, bits or tips
228 With sleeve or cap,
229 Outlet end shapes and orifices,
230 Materials and compositions.

131. TOBACCO—Continued.

Tobacco users' appliances

231 With ash receiver
232 Smoking device cleaner,
233 Tip cutter, perforator or slitter,
234 Igniter or scratching surface,
235 Extinguisher
236 Liquid type,
237 Movable extinguishing member,
238 And devices for other use
239 Match holder,
240 With cigar, cigarette or smoking device rest or holder
241 With special receiver support,
242 With closure or covered compartment,
Smoking device cleaners
243 Combined or compound,
244 Fluid type,
245 Stem,
246 Bowl,
247 Pipe tampers,
248 Cigar tip cutters, combined
249 With igniter or scratching surface,
250 With receptacle or holder
251 Match receptacle,
252 With perforator or slitter,
253 Cigar tip perforators or slitters
254 Pin or drill,
255 Punch,
256 Cigar or cigarette extinguishers,
257 Supports
258 Finger ring type,
259 Staff type,
260 Smoking device.

132 TOILET.

1 **Miscellaneous.**
9 **Hair devices**
10 Mustache holders,
11 Combs
12 Liquid applying or absorbing
13 Fountain type,
14 Hair heating or singeing,
15 Folding or retracting,
16 Independent teeth,
17 Reinforced comb back,
18 Tooth shapes,
19 Auxiliary attachments,
20 Hair holding
21 With comb retainer
22 Pivoted,
23 Spring,
24 Puff supporting,
25 Band,
26 Tooth shapes,
27 Comb cleaners
28 Comb attached,
29 Multiple strand type
30 With attached brush,
31 Crimpers or curlers
32 Crimping-jaw type,
33 Winding forms or mandrels
34 With rotating means,
35 Comb type,
36 With surrounding heater
36. 1 Head protectors,
36. 2 Tubes and wrappers.
37 With hair-clamping jaw,
38 Hair retained
39 Winding forms or mandrels
40 With hair fasteners
41 Clasp type,
42 String or elastic band,

Hair devices
Crimpers or curlers
Hair retained
Winding forms or mandrels
43 Pliable
44 Elastic
45 Dressing or cutting guides
46 Hair fasteners
47 Bow or ribbon holding
48 Clasp or barette type
49 Hair nets
50 Hairpins
51 With movable retainer
52 With auxiliary retaining prongs or clips
53 Hair structures
54 Foundation frames
55 Rolls or rats
56 Making
57 **Hat fasteners**
58 Chin or back head strap or band
59 Head clamping
60 Hair carried
61 Cord or loop with comb or hairpin
62 Rotary hooks or spirals
63 Pivoted
64 Opposed prongs or jaws
65 Sliding
66 Opposed prongs or jaws
67 Guide-projected prongs
68 Hatpins
69 Guides and point guards or holders
70 Guides
71 Pin gripping or locking
72 Point guards or holders
73 **Manicuring devices**
73.5 Combined
73.6 With motor

Manicuring devices
Combined
74.5 With fluent material feed
75 With storage cavity
75.3 Compound tools
75.4 With cutter
75.5 Plural cooperating blade
75.6 With abrader, file or buffer
75.8 Driven type
76.2 Folding, retractable or sheathed tool
76.4 Abrader, file or buffer
76.5 With separable holder
79 **Toilet kits**
80 Shaving
81 Brush and soap type
82 Powder box and applicator
83 With mirror
84 Toothbrush type
85 Brush type
86 Folded, retracted, or pocketed comb
87 With mirror
88 Fixed brush and comb
88.5 **Templets**
88.7 **Shaped cosmetic appliers**
89 **Toothpicks**
90 Folded or housed tool
91 Thread holding
92 With thread-supply container
93 Materials or shapes

133 COIN HANDLING

1 Miscellaneous
2 Change makers
3 Assorters
Deliverers
4 Multiple
5 Single
6 Hand operated
8 Counters

134. CLEANING AND LIQUID CONTACT WITH SOLIDS

Processes

1 Including application of electrical radiant or wave energy to work.
2 For metallic, siliceous, or calcareous base work, including chemical bleaching, oxidation or reduction
3 Including acidic agent
4 Including forming a solidified or hardened coating for cleaning
5 Including melting
6 Using solid work treating agents
7 In particulate or comminuted form
8 Hollow work, internal surface treatment
9 Longitudinally traveling work of bar, strip, strand, sheet, or web form
10 Including regeneration, purification, recovery or separation of agent used
11 Gas or vapor form agent condensed or absorbed on work
12 By distilling, or liquefying vapors of, used agent
13 By crystallizing, precipitating, or eliminating dissolved solids from used agent
14 Work in coiled form during treating agent application
15 Longitudinally traveling work of bar, strip, strand, sheet, or web form
16 Including distortion or deformation of work
17 Produced by temperature change, centrifugal force, or fluid pressure shock
18 Combined (e. g., automatic control)
19 Including work heating or contact with combustion products
20 Carbon removal (e. g., from engines)
21 Including use of vacuum, suction, or inert atmosphere
22 Hollow work, internal surface treatment
23 Work or work parts movable during treatment

Processes

Hollow work, internal surface treatment
24 Movable fluid applying nozzle and/or with plugging or sealing of work passage or opening
25 Work handled in bulk or groups
26 Using sequentially applied treating agents
27 One a neutralizer for another
28 One an acid or an acid salt
29 One a soap or an alkaline agent
30 Including steam, gaseous agent or temperature feature
31 Gas or vapor condensation or absorption on work
32 With work or work parts movable during treatment
33 Centrifugal force and/or rotated work body
34 With treating fluid motion
35 Caused by heating
36 Plural, separately fed, and either simultaneously applied or admixed, treating agents
37 Gas or vapor blasts or currents
38 Paints, varnishes, lacquers, or enamels, removal
39 Carbon removal
40 Oils, grease, tar, or wax removal, by dissolving
41 Metal base work, acid treating
42 Miscellaneous

Apparatus

43 With relatively movable finder and orienter of apertures or passages in work
44 Operating or controlling device engaged and moved by work or separate work holder
45 For vehicle or wheel-form work
46 Devices other than valves (e. g., automatic work counters)
47 Pumps
48 Endless belt or rotary work carriers
49 Through-way work carriers or guides
50 Plural means to supply or apply plural different fluids separately or admixed

Apparatus

Operating or controlling device engaged and moved by work or separate work holder
51 With means for moving work or work-holder by fluid impact thereagainst
52 Engaging element having rotary, swinging, rocking or pivoted motion
53 External and internal fluid applying means
54 External and internal fluid applying means
55 External applying jet means
56 Automatic controls
57 With electric control
58 Electrically controlled
59 With work assembling or disassembling means
60 With interstation fluid flow means
61 Sequential work treating receptacles or stations with means to transfer work or fluid-applying devices
62 With initial work emptying, inverting, orienting, or puncturing means
63 With means for treating work other than with fluids, draining or heating
64 For sheet, web, strand or bar form work, longitudinally traveling
65 With screw work conveyer
66 With work transfer from one movable carrier to another
67 Including endless belt type
68 With splash, spray or jet applying means
69 Between plural rotary carriers on same axis
70 With endless belt work transfer means
71 Horizontal axes
72 With splash, spray or jet applying means
73 With work immersing means
74 With separate movable means to cause fluid motion
75 Sequential endless-carrier immersing means
76 Traversing hoist type work transfer means
77 Curved or non-rectilinear traverse work-path

Apparatus

Sequential work treating receptacles or stations with means to transfer work or fluid-applying devices
78 With rotary or swinging work transfer means
79 Axially rotary
80 Turntable type
81 With synchronized or coordinated valve
82 With guide rails, rods or beams for work or work holders
83 Vertical, inclined, curved or movable or with rollers or work immersion means
84 Plural, separate, work treating or holding receptacles or stations, manual transfer type
85 With movably mounted work holder or receptacle
86 For motion during fluid application
87 Plural, mutually counterbalancing work supports
88 With fluid applying or movable applying means
89 With movable means to cause fluid motion
90 With heater or heat exchanger
91 With valved liquid drain from one or more stations
92 With detachable work holder or receptacle
93 With solid agent dissolving or supplying means
94 With plural means for supplying and/or applying plural different fluids respectively
95 With ordered sequential fluids applying means
96 With coordinated outlet non-impelling control and other device or plural way drain or liquid outlet (e. g., reversing valve)
97 With coordinated inlet non-impelling control and non-inlet-control
98 With coordinated or multiple valves therefor
99 With plural-fluids applying conduits
100 With fluids premixing or contacting means
101 With means for recirculating or reversing fluid flow through conduits
102 With steam, air or gas applying conduits
103 With means for recirculating or reversing fluid flow through conduits

Apparatus

104 With apparatus cleaner and/or escaping material collector
105 With heating, cooling, or heat-exchange means
106 With heat-generatable liquid-flow pressure means
107 Heat-exchange means external to work-treating chamber, vat or zone
108 Recirculation of treating liquid through conduit means
109 With treating fluid purifying or separating means
110 By filter or strainer only (except work-spraying head)
111 With liquid-moving recirculation, or flow reversing, and straining means
112 With brake or clutch
113 With alarm, signal, indicating, testing, inspecting, illuminating or display means
114 With liquid seal
115 Combined or convertible
116 With means to operate movably interconnected parts of work
117 Movably mounted fluid-holding receptacles
118 Rocking or rolling, bottom supported or shifting axis
119 Rotary or swinging motion only
120 Horizontal axis only
121 Vertical axis only
122 For sheet, web, strand or bar form work, longitudinally traveling
123 For vehicle or wheel form work
124 With endless belt work conveyer
125 With guide rails for work or work holder (not for belt)
126 With non-endless-belt work conveyer or manipulator
127 With plural endless belts

Apparatus

With endless belt work conveyer
128 With means to release work held on belt
129 With movably mounted spray or jet applying conduits or nozzle and/or interconnected conveyer and valve
130 With separate movable means to cause fluid motion (e. g., pump, splasher, agitator)
131 With spray or jet applying conduits or nozzles
132 Spiral work path and/or spiral work conveyer (e. g., screw)
133 With work feeding and/or discharging means
134 Rotary, swinging or pivoted, work support feeding or discharging conveyers (except mere gates or stops)
135 With means to hold work holder in draining position above treating liquid
136 Work holder in form of valved plunger
137 With means to movably mount or movably support the work or work support
138 Movably mounted work holder operable by fluid contact
139 With separate movable splasher or pump
140 Motor operated apparatus
141 Fluid motor or turbine
142 Movable support having plural work holders movably mounted thereon (e. g., ferris-wheel type)
143 Interconnected tank closure and other movable element
144 With movably mounted spray or jet applying conduits or nozzles
145 Immovably mounted on movable work support
146 Interconnected movable work support and valve
147 With movable work support and separate movable means to cause fluid motion (e. g., pump, splasher, agitator)
148 And spray or jet applying conduit or nozzle

Apparatus
With means to movably mount or movably support the work or work support
149 Axially rotary chuck, mandrel, rod or axle type holder
150 Work of container-form constituting sole liquid holder
151 With spray or jet applying conduits or nozzles
152 For work having hollows or passages
153 Rotary, pivoted or swinging work holder
154 With non-impelling fluid deflector or baffle
155 With means to drain from, or supply liquid to, the tank
156 Work support having a float and/or spring drive or bias
157 Rotary, revolving, swinging or oscillating motion work holder or carrier
158 With plural work receiving chambers or holders and/or with cover carried by work receiving chamber
159 Horizontal axis
160 Carried by pivotally mounted links or levers or by strands
161 Compound motion
162 Actuating means extending through or carried by tank cover
163 With liquid impeller mounted on work support
164 Work support reciprocated by pivoted links or levers or by strands
165 Rail or rod form guides for work or work holder
166 For work having hollows or passages
167 With movably or flexibly mounted spray or jet applying conduits or nozzles
168 With movable means to cause fluid motion (e. g., pumps)
169 With movable means to cause fluid motion (e. g., pumps, followers)

Apparatus
For work having hollows or passages
170 With means to apply fluids both internally and externally
171 With plural fluid-supplying pipes
172 With movably or flexibly mounted spray or jet applying conduits or nozzles
173 As pump or element thereof
174 With separate pump, splasher or agitator
175 Conduit or nozzle attached to or operatively interconnected with treating chamber closure
176 With fluid discharge reaction nozzle
177 Attached to or operatively interconnected with treating chamber closure
178 Coordinated with valve therefor
179 Fluid discharge reaction nozzle
180 With guiding means to restrict motion to rotation, to swinging, or to an annular closed or to a curved path
181 With motor therefor
182 With non-impelling fluid deflector or baffle, other than conduits or nozzles
183 Movably mounted, adjustable or removable
184 With movable means to cause fluid motion (e. g., pump, splasher, agitator)
185 Compound motion
186 With means to drain from and/or supply liquid to tank
187 Pivoted (e. g., rotary, swinging or oscillating)
188 Motor operated
189 Movable in annular path that surrounds work-space
190 Delivering fluids to work-space through annular, work-space-surrounding, conduit
191 Delivering to conduits or nozzles
192 Actuating means extending through, or carried by, tank cover

Apparatus
With movable means to cause fluid motion (e. g., pump, splasher, agitator)
Pivoted (e. g., rotary, swinging or oscillating)
193 Plural fluid-moving means (excludes single with plural vanes)
194 About horizontal axis
195 Through- or one-way fluid flow pumps
196 Vertically reciprocable (e. g., dashers)
197 Actuating means carried by or extending through tank cover
198 With spray or jet supplying and/or applying means
199 Work circumposable or opposed fluid-applying jets or plural pipes
200 With closable work-treating chambers
201 Miscellaneous

132. TOILET—Continued.

Hair devices

Crimpers or curlers

Hair retained

43 Pliable,

44 Elastic,

45 Dressing or cutting guides,

46 Hair fasteners

47 Bow or ribbon holding,

48 Clasp or barrette type,

49 Hair nets,

50 Hairpins

51 With movable retainer,

52 With auxiliary retaining prongs or clips,

53 Hair structures

54 Foundation frames

55 Rolls or rats,

56 Making.

57 **Hat fasteners**

58 Chin or back head strap or band,

59 Head clamping,

60 Hair carried,

61 Cord or loop with comb or hairpin,

62 Rotary hooks or spirals,

63 Pivoted

64 Opposed prongs or jaws,

65 Sliding

66 Opposed prongs or jaws,

67 Guide-projected prongs,

68 Hatpins

69 Guides and point guards or holders,

70 Guides

71 Pin gripping or locking,

72 Point guards or holders.

132. TOILET—Continued.

73 **Manicuring devices**

73.5 Combined

73.6 With motor,

74.5 With fluent material feed,

75 With storage cavity,

75.3 Compound tools

75.4 With cutter

75.5 Plural cooperating blade,

75.6 With abrader, file or buffer,

75.8 Driven type,

76.2 Folding, retractable or sheathed tool,

76.4 Abrader, file or buffer

76.5 With separable holder.

78.5 **Powder puffs and cosmetic applicators.**

79 **Toilet kits**

80 Shaving

81 Brush and soap type,

82 Powder box and applicator

83 With mirror.

84 Toothbrush type,

85 Brush type

86 Folded, retracted, or pocketed comb

87 With mirror.

88 Fixed brush and comb

89 **Toothpicks**

90 Folded or housed tool,

91 Thread holding

92 With thread-supply container,

93 Materials or shapes.

133 COIN HANDLING

1 **Miscellaneous.**

2 **Change makers.**

3 **Assorters.**

Deliverers

4 Multiple,

5 Single

6 Hand operated.

8 **Counters.**

9 **Packages.**

11 **Receptacles**

12 Mats and trays

13 Counter,

14 Mounted.

134 NO CLASS.

135 TENTS, CANOPIES, UMBRELLAS, AND CANES.

1 Tents
2 Umbrella type,
3 Frames
4 Folding,
14 Heaters, lighters, ventilators, and doors,
15 Pegs, poles, and cover fastenings.
5 Canopies
5.1 Bed
5.2 Expansible.
5.3 Vertical swinging,
6 Boat,
7 Bicycle,
7.1 Frames.
8 Hanging covers.
16 Umbrellas, combined
17 Umbrellas and canes,
18 Imitation-cane case,
19 Independent stick.
20 Umbrellas
21 Suspended,
22 Self opening and closing
23 Tensioned rib and stretcher,
24 Handle release,
25 Folding
26 Sliding rib,
27 Auxiliary frame brace,
28 Runners and notches,
29 Rib and stretcher joints
30 T head and socket,
31 Ribs and stretchers,
32 Gcats,
33 Covers, linings and cases
34 Covers and linings, detachable,

135. TENTS, CANOPIES, UMBRELLAS, AND CANES—Continued.

Umbrellas
Covers, linings and cases
35 Sight openings and ventilators,
36 Rib tips, top protectors, and fasteners,
37 Retainers
38 Runner
39 Sliding,
40 Spring
41 Modified runner,
42 Stick hinge locked,
43 Turning,
44 Tip,
48 Drip cups.
45 Canes and sticks
46 Umbrella sticks,
47 Modifications and attachments,
49 Crutches
50 Extensible,
51 Handholds,
52 Arm rests,
53 Tips,
54 Tips.

136 BATTERIES.

1 **Miscellaneous.**
2 **Battery and control element.**
3 **Secondary and primary.**
4 **Thermal**
5 Elements and compositions.
6 **Secondary**
7 Electrode and vessel combined.
Planté-Faure
8 Electrodes,
Faure
9 Electrodes
10 Bipolar
11 Multivoltage,
12 Nonconducting grids,
13 Concentric and spiral,
14 Cylindrical,
15 Coupled,
16 Expansion means,
17 Horizontal
18 Tray,
19 Coated,
20 Active material
21 Self-supported,
22 Carbon,
23 Copper,
24 Chromium, cadmium, cobalt,
25 Iron,
26 Lead
27 Processes,
28 Nickel
29 Processes,
30 Zinc
31 Deposited on other conductors,
Processes
32 Charging,
33 Drying,

136. BATTERIES—Continued.
Secondary
Faure
Electrodes
Active material
Processes
34 Forming,
35 Casting,
36 Grids
37 Active material divided
38 Cellular
39 Locking
40 Pocket
41 Divided plate,
42 Tongues,
43 Longitudinal tubes,
44 Channeled
45 Corrugated,
46 Laminated,
47 Superposed troughs,
48 Single plane perforate,
49 Active material integral
50 Perforate
51 Double wall,
52 Receptacle conducting
53 Cores,
54 Receptacle nonconducting
55 Cores,
56 Bimetallic,
57 Carbon, aluminum, iron,
58 Nonconducting
59 Porous,
60 Sinuous ribbon,
61 Studded plate,
62 With retainers conducting,
63 With retainers nonconducting,
64 Coated,
65 Compositions,

136. BATTERIES—Continued.
Secondary
Faure
Electrodes
Grids
Processes
66 Casting,
67 Filling,
Planté
68 Electrodes
69 Concentric
70 Laminated
71 Integral core,
72 Plugs,
73 Porous,
74 Wire,
Processes
75 Making,
76 Forming,
77 Surface treatment
78 Processes,
79 Supports
80 Electrode on vessel,
81 Plate locking means,
82 Forming apparatus,
83 **Primary**
84 Carbon,
85 Earth,
86 Gas,
87 Pile,
88 Standard,
89 Electrooptical,
90 **Deferred action type**
91 Plunge,
92 Tilting,
93 Two-fluid
94 Iron,
95 Zinc
96 Chromates,
97 Nitrates,

136. BATTERIES—Continued.
Primary
Two-fluid
Zinc
98 Sulphates
99 Gravity,
100 One-fluid
101 Iron,
102 Zinc
103 Chlorides,
104 Chromates,
105 Nitrates,
106 Oxides
107 Dry
108 Multiunit,
109 Multivoltage,
110 End to end,
111 Flat type,
112 **Deferred action type**
113 Mechanical manipulation,
114 Solution separate,
115 CuO-Zn
116 Compositions,
117 Processes,
118 PbO-Zn,
119 Sulphates,
120 Electrodes
121 Carbon
122 Processes,
123 Bobbins
124 Processes,
125 Zinc
126 Processes,
127 Coated,
128 Tubular
129 Coated,
130 Sheet.
131 **Linings and processes.**
132 **Wrappers.**

136. BATTERIES—Continued.
133 **Sealing means.**
Connections
134 Electrode,
135 Terminals.
136 **Depolarizers**
137 Chemical
138 Manganese compounds,
139 Processes,
140 Mechanical
141 Rotary.
142 **Diaphragms**
143 Separators
144 Absorbents,
145 Reinforced and composite.
146 Compositions,
147 Envelopes,
148 Processes,
149 Wood
150 Processes,
151 Plugs,
152 Porous cups.
153 **Electrolytes**
154 Solutions
155 Halogens,
156 Processes,
157 Gelatinous
158 Processes,
159 Circulation
160 Forced,
161 Conditioning,
162 Feeding,
163 Creepage, splash and evaporation prevention.
164 **Regenerating and reviving**
165 Secondary.
166 **Vessels and receptacles**
167 Linings,
Closures
168 Post and seal,

136. BATTERIES—Continued.
Vessels and receptacles
Closures
169 Primary,
170 Secondary,
171 Cradles,
172 Wells,
173 Racks,
174 **Repair.**
175 **Assembling processes**
176 Secondary.
177 **Vents**
178 Valve controlled,
179 Gas absorbing, cleaning, and burning.
180 **Ventilating systems.**
181 **Attachments and accessories**
182 Testing and indicating.

137 WATER DISTRIBUTION.

Check valves
122 Radiator vent.
Cocks and faucets
Reversing
Reciprocating
151 Horizontal,
148 Rotary,
93 Water-closet valves.
9 **Cut-offs and spouts.**
Drain valves
34 Manual control,
34.1 Automatic control
34.2 Liquid pressure,
34.3 By thermal element,
101 **Feeders.**
104 **Float valves.**
161 **High temperature**
162 Valve closing, fuse operated.
13 **Hydrants and plugs.**
102 **Indicators.**
77 **Leak detectors.**
78 **Systems**
79 House.
73 **Taps.**
69 **Valves**
69.1 Inflation stem type,
69.5 Inflating devices.
111 **Miscellaneous.**
156 **Pressure-responsive devices**
156.5 Bellows type,
157 Diaphragm.
164 **Proportional flow**
165 With mixing.
166 Dividers,
53 **Safety valves**
137 Steam engine.
18 **Sampling tubes.**

137. WATER DISTRIBUTION—Con.
20 **Siphons.**
21 **Tanks**
68 Automatic
163 Periodic discharge,
106 Siphon.
103 **Traps**
Float valve
113 Air port,
Pressure-operated valve
114 Air port.
139 **Valve actuation**
152 Flow control
152.5 Differential pressure.
153 Fluid-pressure control.
159 Marine-governor type.
145 Periodic
146 Rotary,
140 Speed controlled
141 Periodic
142 Rotary,
143 Pressure motor,
144 Systems
158 Turbine control.

138 PIPES AND TUBULAR CONDUITS

25 **Miscellaneous.**
26 **With pressure compensators**
27 Freeze protecting
28 Expansible or compressible tube element,
30 Variable capacity chambers
31 Piston or plunger type.
32 **Thawing and freeze protection**
33 Electric,
34 Anti-freeze substance,
35 Portable thawing apparatus.
36 **With wear indicator.**
37 **With flow regulators and/or baffles**
38 Heat transfer,
39 Flow facilitating,
40 Restrictors
41 With screen,
42 Tortuous path
43 Variable restriction,
44 Central path
45 Variable restriction,
46 Variable restriction.
47 **Structure**
48 Underground conduits for pipes and cables,
49 Flexible
50 Metallic
51 Spiral wound,
52 Jointed sections,
53 Collapsible
54 With support,
55 Composite
56 With metal
57 Metal armored and lined,
58 Metal lined
59 Spaced lining element,
60 Metal armored,

138. PIPES AND TUBULAR CONDUITS—Continued.

Structure
Flexible
61 Hose protectors,
62 Composite, with metal
63 Spaced layer,
64 Different material
65 Plural duct,
66 With clay, concrete or masonry
67 Jointed,
68 Coated,
69 Reinforced
70 Corrugated
71 Longitudinally sectioned,
72 Longitudinally sectioned,
73 Spirally seamed,
74 Longitudinally seamed
75 Sectional,
76 Non-metallic
77 Plural duct,
78 Paper,
79 Wood,
80 Clay, concrete or masonry
81 Sectional blocks
82 Plural duct,
83 Plural duct,
84 Metal reinforced
85 Jointed,
86 Composite,
87 Plural duct,
88 Closed end.
89 **With closures and plugs**
Inflation stem type
89.1 Air and dust cap
89.2 Combined,
89.3 Air cap,
89.4 Dust cap.
90 Test plugs,
91 Double end,

138. PIPES AND TUBULAR CONDUITS—Continued.

With closures and plugs
92 Lateral opening,
93 Inflatable,
94 Laterally insertible
95 Return bend type.
96 **End protectors.**
97 **Repairing**
98 Patches
99 External.

139 TEXTILES, WEAVING.

1 **Misce laneous.**
2 **Pile tufting**
3 Around warp
4 Oriental knot
5 Warp traversing,
6 Portable supply,
7 Portable supply
8 Including tuft presenting
9 Tuft presenting
10 Tube frames.
11 **Special-type looms**
12 Progressive shedding
13 Circular
14 Open back
15 Contacting shuttle and shed control,
16 Radial heddle movement,
17 Open-back shed,
17.5 Supplemental open-back shed,
18 Vertical shed
19 Seed-corn stringers,
20 Multiple-shed
21 Pile,
22 Narrow ware
23 Rack and pinion shuttle motions,
24 Irregular warp feed
25 Terry
26 Beat-ups
27 Separate reed,
28 Pushed shed pocket,
29 Hand looms
30 Pushed harness
31 Cam shedding,
32 Cam shedding,
33 Manual shedding
33.5 Darning.
34 Warp frames.

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139. TEXTILES, WEAVING—Contd.

35 Warp manipulation
36 Fluid treatment,
37 Pile
38 Loop hook,
39 Transverse wire
40 Wire control
41 Including end motions
42 End motions.
43 Separate cutting mechanism,
44 Pile wires,
45 Oiling,
46 Longitudinal wire, traversing
47 Anchored release end,
48 Traversing
49 Lappet,
50 Leno or gauze
51 Doup heddle
52 Heddles,
53 Needle-eye heddle,
54 Selvage,
55 Shedding
56 Disconnecting mechanism,
57 Pushed harness
58 Double-acting cam,
59 Jacquard
60 Knotted cord,
61 Multiple cylinder,
62 Group control,
63 Locked open shed,
64 Mid closing,
65 Double lift,
66 Dobby
67 Vibrating griff
68 Jacquard pattern,
69 Mid closing
70 Curved motion,

139. TEXTILES, WEAVING—Contd.

Warp manipulation
Shedding
Dobby
Vibrating griff
71 Double lift
72 Locked open shed
73 Irreversible transmission,
74 Evener direct,
75 Harness levelers,
76 Rotating actuator
77 Vibrator gear,
78 Pattern direct,
79 Cam
80 With varying means,
81 Double acting,
82 Harnessing
83 Power to both sides,
84 Power to top
85 Jacquard
86 Comber boards,
87 Interharness connections,
88 Strap connections,
89 Retractors
90 Lingoes,
91 Harnesses
92 Supplemental heddle rod,
93 Heddles
94 Separate eye,
95 Twisted wire,
96 Perforated strip,
97 Feeding
98 Lease rods,
99 Interconnected let-offs and take-ups,
100 Let-offs
101 Multiple
102 Pile,
103 Tension regulated.

139. TEXTILES, WEAVING—Contd.

Warp manipulation
Feeding
Let-offs
104 Independent of supply,
105 Speed regulation
106 Exhaustion compensated
107 Radius
108 For positive,
109 Tension
110 For positive,
111 Automatic arresters
112 Beat-up resisting,
113 Manual resetters,
114 Whip rolls
115 Positive slackeners.

116 Weft manipulation
116.5 Pile
116.6 Longitudinal wire, anchored release end,
117 Special length
118 Fringe,
119 Swivel shuttle
120 With main-shuttle control,
121 With rack and pinion,
122 Stationary supply
123 Needle
124 With selvage formers,
125 Shuttle type
126 Cut lengths,
127 Cut lengths,
128 Separate wefts
129 Without shedding,
130 Pulled in
131 Shuttle type,
132 Selectors,
133 Shuttle motions
134 Magnetic.

139. TEXTILES, WEAVING—Contd.

Weft manipulation
Shuttle motions
135 Narrow ware, positive
136 Rack and pinion
137 Weft change,
138 Actuators,
139 End engagement
140 Single shuttle,
141 End engagement, positive,
142 Fly
143 Intermediate pickers,
144 Pneumatic,
145 Spring propelled,
146 Lay-carried stick
147 Vertical bell crank,
148 Foot actuated,
149 Foot construction
150 Rocker,
151 Lug connections
152 Foot supported,
153 Lug straps,
154 Lug-strap supports,
155 Shuttle positioners,
156 Disconnecting mechanisms,
157 Picker sticks,
158 Picker spindles,
159 Pickers
160 Spindle-guided pickers,
161 Picker checks,
162 Special connection,
163 Friction
164 Lateral,
165 Double-acting shifter
166 Nonmetallic buffer,
167 Spring buffer
168 With taut strap,
169 With pivoted arm,
170 With offset arm,

139. TEXTILES, WEAVING—Contd.

Weft manipulation

171 Box change motions
172 Revoluble box,
173 Vibrating actuator and wheel
174 Rack and pinion,
175 Vibrating actuator and catch
176 Varied
177 Step type,
178 Rotating actuator and gear
179 Axial shift,
180 Vibrator gear,
181 Connecting motions,
182 Box-supporting instrumentalities,
183 Shuttle boxes
184 Multiple,
185 Shuttle checks
186 Shuttle actuated,
187 Relieving,
188 Lays or beat-ups

139. TEXTILES, WEAVING—Contd.

Weft manipulation

Lays or beat-ups
189 Loose reed,
190 Motions
191 Separate reed,
192 Reeds,
193 Shuttle guards,
194 Tensions,
195 Selvage-loop retainers,
196 Shuttles
197 Types
198 Exteriorly supported cop,
199 Bow
200 Brake tension,
201 Tortuous-course tension,
202 Roller bearing,
203 Detecting
204 Float,
205 Exhaust,
206 Thread-carrier supports

139. TEXTILES, WEAVING—Contd.

Weft manipulation

Shuttles
Thread-carrier supports
207 Automatically replenished,
208 Pivoted spindle
209 Detachable,
210 Spindle-actuated retainer
211 Exterior,
212 Thread-delivery control
213 Uncoiling engagement,
214 Tortuous course
215 Threader slot,
216 Spring clamp
217 Threader slot,
218 Friction material
219 Threader slot
220 Loom threading,
221 Threading feature
222 Slot
223 Loom threading,

139. TEXTILES, WEAVING—Contd.

Weft manipulation

224 Replenishing
225 With other loom-parts control
226 Suspension
227 Of main shaft,
228 Of stopping,
229 Delayed,
230 Prevented
231 Revoked,
232 Multicolor type
233 Feeler mechanism,
234 Shuttle changing
235 Manually controlled,
236 Supply and discharge at different ends,
237 Exhausted shuttle deflected,
238 Contacting shuttles,
239 Movable shuttle box
240 Progressive,

139. TEXTILES, WEAVING—Contd.

Weft manipulation
Replenishing
241 Bobbin changing
242 By moving transferrer
243 Lay actuated,
244 Transferrer tips,
245 Bobbin supply
246 With thread control
247 With gravity feed,
248 With rotary battery,
249 Rotary battery
250 Battery feeds,
251 Bobbin guides or supports,
252 Shuttle positioners
253 Inner tip pushers,
254 Bobbin-smash preventers,
255 Ejected-bobbin receivers,
256 Thread control
257 Incoming thread
258 Attached to magazine
259 Shuttle threading,
260 Positioning outgoing thread for cutting,
261 Shuttle clearing
262 With bobbin manipulation,
263 Cutting mechanism
264 On shuttle feeler,
265 On lay,
266 On temple,
267 Operated by transfer,
268 Operation prevented,
269 Feeler mechanisms
270 Suspended actuation,
271 Positively withdrawn
272 Lay carried,
273 Electric,
274 Magnetic,
275 Detector in shuttle,

139. TEXTILES, WEAVING—Contd.

Weft manipulation
Replenishing
Feeler mechanisms
276 Becoming quiescent
277 With auxiliary bobbin and shuttle contact,
278 Yarn impinging and lay actuation,
279 Yarn impinging and penetrating members,
280 Rotary,
281 Side slipping
282 Spring stressed
283 Pivoted carrier,
284 Slidable carrier,
285 Pivoted carrier,
286 Slidable carrier,
287 Feeler tips,
288 Positioners,
289 Feeler cooperating bobbin elements,
290 Stopping devices.
291 **Fabric manipulation**
292 Temples
293 Clamping jaw,
294 Rotary
295 Roller and pod,
296 Roller surfaces,
297 Bearing for rollers,
298 Supports
299 Sliding,
300 Displacing means,
301 Positioning adjustments,
302 Selvage trimmers
303 Lay actuated,
304 Take-ups
305 Irregular shape,
306 Traversing,

139. TEXTILES, WEAVING—Contd.

Fabric manipulation
Take-ups
307 Sand-roll type
308 Contacting wind-up,
309 Speed regulation
310 Increase compensated,
311 Tension,
312 Manual,
313 Automatic let-backs,
314 Automatic arresters,
315 Fraud preventers,
316 Manual resetters.
317 **Pattern mechanism**
318 Picture pattern
319 Electrical,
320 Lateral shift,
321 Skip motions,
322 Multiple cylinder
323 With control pattern,
324 Reverse
325 With control pattern,
326 Multipliers,
327 Loom-part control,
328 Reset,
329 Cylinder motions,
330 Cylinders,
331 Feelers,
332 Pattern guides,
333 Patterns
334 Movable pins,
335 Cards.
336 **Stopping**
337 Harness-mechanism actuated,
338 Pattern-mechanism actuated,
339 Take-up-mechanism actuated,
340 Predetermined,
341 Shuttle-position detectors
342 Improper presence in shuttle box
343 Shuttles in both boxes,

139. TEXTILES, WEAVING—Contd.

Stopping
Shuttle-position detectors
344 Positive-shuttle-motion type,
345 Protector-rod type
346 With sliding frog,
347 With relief mechanism,
348 Thin-place detectors,
349 Warp
350 With leasing,
351 With break locating,
352 Nonindividual detector,
353 Electrical
354 Pivoted detector,
355 Shed-lifted detector
356 Lay knock-off,
357 Lay knock-off,
358 Supports,
359 Nonarrestable vibrator,
360 Arrestable vibrator
361 Pivoted detector
362 Lay knock-off,
363 Shed-lifted detector
364 Lay knock-off,
365 Transverse motion
366 Lay knock-off,
367 Lay knock-off,
368 Detectors,
369 Suports,
370 Weft
371 Detector in shuttle,
372 Detector fork
373 Vibration preventers,
374 Lay carried
375 Dropping
376 Supplementally aided,
377 Slidable tilting
378 Forks,
379 Grids and cleaners.

139. TEXTILES, WEAVING—Contd.

380 **Weavers' implements**
381 Shuttle threaders
382 Pneumatic.
383 **Fabrics**
384 Special shape
385 Fringes,
385.5 Collar,
386 Curved,
387 Tubular
388 Uniform,
389 Bags and pockets
390 Permanently united,
391 Pile
392 Weft
393 Chenille
394 Multiweft planes,
395 Chenille strands,
396 Terry,
397 Separable fabrics
398 Each with multiweft planes,
399 Tufted
400 Oriental knot,
401 Multiweft planes,
402 Regularly shedded warp
403 Multiweft planes,
404 Selected warp
405 Multiweft planes
406 Divided by stuffer warp,
407 Separable,
408 Multiweft planes
409 Independent plies
410 Two-ply,
411 Three-weft planes
412 Separated weft,
413 Two-weft planes
414 Separated weft
415 Divided by stuffer warp,

139. TEXTILES, WEAVING—Contd.

Fabrics
416 Figured, single-weft plane
417 Striped,
418 Double faced,
419 Cross weave,
420 Materials
421 Elastic
422 Inelastic sections,
423 Multiweft planes,
424 Including straw or vegetable stalks.
425 Including metal,
426 Textile-thread type
427 Including nonfelting animal fibers
428 Silk.

140 WIREWORKING.

1 **Combined machines.**
2 **Miscellaneous.**
'1 **Article making or forming**
72 Heddles,
73 Bale ties,
74 Box straps,
75 Bails,
76 Ferrules,
77 Hat wires,
78 Conical springs
79 By rolls,
80 Hooks
81 Garment,
82 Clips
83 Clothespins,
84 Belt lacings,
85 Cork fasteners,
86 Corkscrews,
87 Hairpins,
88 Rings,
89 Spring setting,
90 Stays
91 Garment,
92 Stud spirals,
92.1 Forms and frames
92.2 Revoluble.
93 **Applying wire**
94 Bottles and corks
95 Rotary bottle,
96 Brush making,
97 Card clothing
98 Making
99 Fillet feeding,
100 Comb making.
3 **Fabric making**
4 Rotary machines,
All wire
5 Multiple strand,

140. WIREWORKING—Continued.

Fabric making
All wire
6 Hexagonal mesh,
7 Quadrangle mesh
8 Coiled,
9 Diamond mesh,
10 Stay applying
11 Clip joining,
12 Wrapped loop,
13 Short stay,
14 Looped strand,
15 Successively wrapped stay,
16 Portable machines
17 Mesh making,
18 Stay applying
19 Multiple strand,
20 Clip joining,
21 Wrapped loop,
22 Looped strand,
23 Successively wrapped stay,
24 Edge-strand binding,
25 Slat and wire
26 Slat cutting,
27 Magazine,
28 Dummy spacing,
29 Movable carriage,
30 Strand twisting
31 Embedding,
32 Beaters,
33 Spreaders,
34 Strand coiling,
35 Weavers,
36 Twister heads,
37 Portable machines
38 Magazine,
39 Strand twisters
40 Slat adjustment,
41 Plumb adjustment,
42 Beaters,

140. WIREWORKING—Continued.
Fabric making
Slat and wire
Portable machines
Strand twisters
43 Vertically adjustable,
44 Eccentric type,
45 Wire crossers
46 Oscillatory,
47 Strand coilers,
48 Weavers,
49 Tie-wire appliers,
50 Spacers,
51 Clamps,
52 Implements
53 Magazines
54 Revoluble head,
55 Clip affixing,
56 Slat attaching
57 Tie-wire appliers.
58 **Barbing**
59 Barb-wire feeding
60 Multiple strand,
61 Four-point barbs
62 Strand crimping,
63 Rotary coilers,
64 Strand crimping,
65 Rotary coilers,
66 Sheet metal,
67 Separate barbs,
68 Pickets,
69 Implements
70 Revoluble head.
101 **Knotting.**
102 **Loop forming**
102.5 Implements,
103 Coil springs.
104 **Eye forming.**
105 **Crimping**
106 Implements.

140. WIREWORKING—Continued.
107 **Fabrics, working**
108 Stretchers
109 Frame attaching
110 Bed bottoms.
111 **Joining wire**
112 Electric welding,
113 Machines
114 Interlocking eyes, making,
115 Revoluble head,
116 Tying dies,
117 Implements
118 Twisters
119 Revoluble head,
120 Spread wire,
121 Plier type,
122 Revoluble head.
123 **Implements**
123.5 Stretchers
123.6 Cutting feature,
124 Coiling.
125 **Wire feeding**
126 Automatic stop,
127 Drum
128 Tangential contact,
129 Intermittent
130 Oscillating clamp,
131 Recessed roller,
132 Short lengths.
133 **Tension devices**
134 Equalizers,
135 Friction clamp,
136 Friction roller,
137 Tortuous course
138 Adjustable.
139 **Wire cutting and straightening**
140 Predetermined lengths.
141 **Wire cutting**
142 Dies,
143 Oscillating apertured cutter.

140. WIREWORKING—Continued.
Wire cutting
144 Pivoted cutter,
145 Reciprocating cutter,
146 Rotary cutter.
147 **Wire straightening**
148 Rolls.
149 **Wire twisting.**

141 WASHING APPARATUS.

6 **Barrel washers.**
7 **Bottle and can washers.**
9 **Dish cleaners.**
8 **Dish cleaners and drainers combined.**
11 **Dish drainers.**
1 **Miscellaneous.**

13 **Roll cleaners.**
3 **Tumbler washers.**

142 WOOD TURNING.

1 **Miscellaneous.**
Polygonal section
2 Annular work holders
52 Chucks.
Pattern section
3 Many-spindle lathes,
Oval form
16 Guided chucks
51 Counterpoises,
Copying
Cutter
7 Laterally and longitudinally movable,
Rotary
11 Fixed bearings,
13 Laterally movable,
15 Longitudinally movable,
Clamped work
Cutter chisel
8 Laterally and longitudinally movable,
Cam controlled
Cutter
6 Laterally and longitudinally movable,
Rotary
10 Fixed bearings,
12 Laterally movable,
14 Longitudinally movable,
Cutter
9 Rotary.
Circular section
4 Many-spindle lathes
5 Automatic spindle feed,
Spiral grooving
23 Hollow cutter head,

142. WOOD TURNING—Continued.
Circular section
Spiral grooving
Cutter
26 Rotary
24 Pattern guide,
25 Hollow mandrel,
33 Rack-and-pinion feed,
34 Roller feed,
35 Chisel,
17 Automatic spindle lathes
18 Endless feed
19 Disk,
20 Chute feed,
Clamped work
Hollow cutter head
45 End turning,
Cutter chisel
46 Longitudinally movable,
32 Hollow cutter head
31 Cutter chisel
27 Radially movable, pattern guide
28 Rotary,
Pattern
30 Radially movable,
29 Radially movable,
Cutters
Chisels, plain and pattern
21 Pattern guide,
Rotary and chisel
22 Pattern,
Cutter
Slicing
36 Longitudinally movable,
40 Rotary
37 Pattern guide,
41 Pattern,

142. WOOD TURNING—Continued.
Circular section
Cutter
42 Chisel
38 Pattern guide
39 Rotary
43 Pattern
44 Disk.
47 **Carriage feed.**
48 **Tool rests and work supports.**
49 **Tool rests.**
Steady rests
50 Yielding
53 **Lathe centers.**
54 **Hollow mandrels.**
55 **Attachments.**
56 **Turning tools.**
Work holders
57 Socket.

143 WOOD SAWING.

1 **Combination machines.**
2 **Hoop-pole machines**
3 Band saw,
8 **Shingle machines**
9 Reciprocating saw,
10 Belt feed,
11 Dog-and-step feed,
12 Roller feed,
13 Tilting gage,
14 Tilting table
15 Rotary carriage.
4 **Resawing machines**
5 Band saw.
6 **Mitering machines**
7 Reciprocating saw.
16 **Arc-saw machines.**
17 **Band-saw machines**
18 Centered log,
19 Horizontal saw,
20 Inclined,
21 Multiple idlers,
22 Multiple saw,
23 Retarded idler,
24 Tilting frame,
25 Reciprocating carriage,
26 Special feed,
27 Automatic tension regulators,
28 Catchers,
29 Pulley cleaners and lubricators,
30 Pulleys,
31 Saw-lead adjustments.
32 **Chain-saw machines.**
33 **Circular-saw machines**
34 Pile cutting,
35 Adjustable saw
36 Angular,
37 Lateral,

143. WOOD SAWING—Continued.

Circular-saw machines

38 Angular
39 Centered log,
40 Auxiliary saw,
41 Drop saw,
42 Knife disk,
43 Portable,
44 Rim driven,
45 Successive,
46 Swinging saw,
47 Traveling saw,
48 Special feed,
49 Chain feed,
50 Lathe feed,
51 Pusher feed,
52 Reciprocating carriage
53 Automatic feed,
54 Mechanically operated,
55 Roller feed
56 Gang,
57 Rotary carriage,
58 Swinging carriage,
59 Tilting work support.
60 **Reciprocating-saw machines**
61 Drag
62 Automatic return,
63 Crank,
64 Lever,
65 Lever and bow,
66 Lever and gears,
67 Lever and lazy tongs,
68 Motor,
69 Oscillatory,
70 Scroll
71 Frame,
72 Free-end saw,
73 Spring return,
74 Swivel saw,

143. WOOD SAWING—Continued.

Reciprocating-saw machines

75 Special cut
76 Pattern guide,
77 Pivoted work holder,
78 Tilting saw frame,
79 Laterally adjustable arm,
80 Piston connected,
81 Vibrated saw
82 Lever driven,
83 Pivoted guides,
84 Roller feed.
85 **Tubular-saw machines.**
105 **Sawmill carriages**
106 Friction feed
107 Disk,
108 Motor feed,
109 Offsetting
110 Draft operated,
111 Friction operated,
112 Lever operated,
113 Track operated.
114 **Sawmill set works**
115 Automatic,
116 Direct actuated,
117 End dogs,
118 Fluid operated,
119 Pawl and rack,
120 Power operated,
121 Spring retracted,
122 Supplemental support,
123 Wedge,
124 Appliances.
125 **Sawmill dogs**
126 Lever,
127 Lever and cam,
128 Lever and cooperating gears,
129 Lever, gear and rack,
130 Lever, pawl and rack,
131 Screw.

143. WOOD SAWING—Continued.

92 **Log transfers**
93 Pusher blocks,
94 Trough and kicker.
95 **Log turners and deck blocks.**
96 **Log deck blocks.**
97 **Log turners**
98 Bar and chain,
99 Bar and inclined pistons,
100 Bar and parallel pistons,
101 Bar and piston,
102 Endless,
103 Hook,
104 Hook and chain.
132 **Saw tables.**
133 **Saws**
134 Bent,
135 Chain,
136 Dished,
137 Expansion aperture,
138 Gumming aperture,
139 Sectional,
140 Smoothing.
141 **Saw teeth**
142 Crosscut,
143 Planer,
144 Reversible.
145 **Saw teeth, fastenings**
146 Bridge plate,
147 Cap
148 Separable bit,
149 Key,
150 Key and locking plate,
151 Locking plate,
152 Spring latch,
153 Wedge,
154 Wedge and locking plate.

Saw hanging

155 Circular saw,
156 Reciprocating saw.

143. WOOD SAWING—Continued.

157 **Sawing-machine appliances.**
158 **Saw cleaners and oilers.**
159 **Saw guards.**
160 **Saw guides**
161 Back disk,
162 Back roller,
163 Drag,
164 Oilers,
165 Pivoted arm,
166 Sliding arm,
167 Work engaging.
168 **Saw-table gauges**
169 Angular adjustment
170 Vertical,
171 Curve cutting,
173 Roller,
174 Sliding
175 Link,
176 Rack and pinion.
86 **Miter boxes**
87 Adjustable
88 Biplane,
89 Swinging saw guide,
90 Swinging work guide.
91 **Sawbucks.**

50 **Match making**
51 Wax and paper,
52 Cutting, framing, and dipping
53 Die punches,
54 Cutting and framing
55 Die punches
56 Fixed,
57 Cutting and coiling,
58 Framing and dipping,
59 Coiling,
60 Dipping,
61 Box filling,
Dipping frames
62 Emptying,
63 Filling
64 Hopper feed,
65 Dipping frames,
66 Splint feed mechanism.
207 **Osier peelers.**
208 **Rossing bark.**
2 **Special-work machines**
3 Combined
5 Blind and sash cutting
6 Relishing,
7 Box blank,
8 Chair-round tenoning and sawing,
9 Clothespin,
10 Conveyor flight,
11 Handle,
12 Pin,
13 Shingle,
14 Spool,
15 Wheel tenoning and boring,
16 Wheel hub,
17 Wheel-felly boring and sawing,
18 Wheel-spoke tenoning and sawing,

144. WOODWORKING—Continued.
Special-work machines
Combined
19 Window-stile-pocket cutting,
4 Circular section.
Single or combined
20 Disk cutting and boring,
21 Disk cutting
22 Blank sawing, feeding, and punching,
23 Rotary tubular cutter,
24 Sweep cutter,
25 Box hooping,
26 Comb-teeth cutting,
27 Hinge-seat cutting,
28 Pencil-wood making,
29 Piano-hammer felting,
30 Pin pointing,
31 Pin setting,
32 Screw driving,
33 Tray making,
34 Tree felling.
1 **Combined machines**
35 Boring and sawing,
36 Planing and matching,
37 Planing, matching, and dividing,
38 Planing and polishing,
39 Planing and sawing,
40 Riving and shaving,
41 Shaping and dividing,
42 Slicing and scoring,
43 Slicing and shaving
44 Converging knives,
45 Tenoning and boring,
46 Turning and boring,
47 Turning and polishing,
48 Turning and sawing.
49 **Miscellaneous single-operation machines.**

144. WOODWORKING—Continued.
Mortising
67 Multiple chisel
68 Portable,
69 Auger cutter
70 Portable,
71 Automatic step feed,
72 Chain cutter
73 Portable,
Chisel
74 Boring and mortising,
75 Chisel
76 Portable,
77 Chisel reversers,
78 Hollow chisel and bit
79 Portable,
80 Oscillating chisel
81 Portable,
82 Rotary cutter
83 Portable,
84 Work supports.
85 **Dovetailing**
86 Consecutive cutters,
87 Frusto-conical bit,
88 Inclined chisel,
89 Inclined rotary disk.
90 **Matching**
91 End.
92 **Boring**
93 Special work,
Brush
94 Multiple bit,
95 Rotating work holder,
96 Tilting work holder,
97 Wheel hub
Axial
98 Stationary bitstock,
99 Stationary work
100 Inclined bitstock,
101 Opposite rotary bitstocks,

144. WOODWORKING—Continued.
Boring
102 Wheel felly,
103 Swinging,
Portable
104 Hand
105 Overhead work,
106 Angularly adjustable,
Long work
107 Automatic step feed,
108 Hand-operated step feed,
109 Traveling tool,
110 Multiple
111 Double-ended bitstock,
112 Relative lateral adjustment,
113 Hollow auger.
Planers
114 Miscellaneous,
115 Scrapers,
Beveling
124 Lateral,
Longitudinal
125 Inclined work pocket,
126 Shifting cutter,
127 Shifting work support,
Rotary cutter
Cylinder
116 Double surfacers,
117 Cylinder
131 Bearings,
118 Disk
119 Traveling,
120 Stationary cutter
132 Bit adjustments,
121 Reciprocating cutter
122 Lateral,
123 Endless-cutter carrier,
128 Endless bed,
129 Bed adjustments,
130 Cutter adjustments.

144. WOODWORKING—Continued.

133 **Gaining.**
Shaping
134 Miscellaneous,
135 Box trimming,
136 Grooving,
Pattern
137 Miscellaneous,
138 Polygonal forms, indexed work,
139 Rotating table, shifting cutter,
140 Gear-guided cutter,
141 Crank-guided cutter,
Cam
142 Cutter guiding,
143 Work guiding,
Templet
144 Cutter guiding
144.5 Templets,
145 Work guiding,
146 Oscillating knife,
147 Reciprocating knife,
148 Reversible cutter,
149 Pattern knife, swinging frame,
150 Rotary cutter, end thrust,
151 Universally jointed cutter shaft,
152 Curved-work guide,
153 Curved-bar work support,
154 Rotary work carrier.
Shaving
155 Fixed knife
156 Circular knife block,
157 Drum feed,
158 Roller feed,
159 Knife pair
160 Gripper,
161 Roller feed.
162 **Slicers**
163 Reslicers,

144. WOODWORKING—Continued.

Slicers
Strip cutting
164 Converging knives
165 Lathe feed,
166 Lathe feed,
167 Arc cut,
Beveling
168 Alternate end feed,
169 Shifting, knife guide,
170 Tilting gauge,
171 Tilting table,
172 Cylinder
173 Grooving,
174 Radial knife,
175 Fixed knife,
176 Rotary disk,
Stay log
177 Oscillating,
178 Reciprocating,
179 Screw feed,
180 Hopper feed,
181 Roller feed.
182 **Riving**
183 Beveling,
184 Fixed knife.
185 **Slivering**
186 Scoring plane
187 Endless belt,
188 Rotary,
189 Gang saw,
190 Plunger and fixed knife,
191 Receiving and handling devices.
192 **Splitting and bundling.**
193 **Splitting**
194 Self-feeding
195 Roller and belt.
196 **Punching cutters**
197 Fixed die.

144. WOODWORKING—Continued.

198 **Tenoning**
199 Blind slat.
200 Rotary cutters,
201 Rotary gaining cutters,
202 Chisel pair,
203 Rotary gaining cutters
204 Multiple tenon.
205 **Tenon turning**
206 Wheel spoke.
209 **Veneer lathes**
210 Convertible,
211 Inclined knives,
212 Knives and knife blocks,
213 Presser bars and rolls,
214 Stay logs,
215 Strip-cutting attachments.
216 **Miter cutters**
217 Angle knife.
Cutters
Rotary
218 Miscellaneous,
219 End thrust,
220 Frusto-conical,
Cylindrical
221 Spiral bit,
230 Slotted bit seat,
Saw
Double
222 Intermediate cutter,
238 Wabble,
239 Distorted,
Single
223 Side cutter,
Polygonal
224 T-slot bit clamp,
225 Plane bit seat,
226 Convex bit seat,
227 Concave bit seat,

144. WOODWORKING—Continued.

Cutters
Rotary
Radial arms
228 Plane bit seat,
229 Slotted bit seat,
Disk
Multiple clamping disks
231 Tangential bit,
232 Pivoted bit,
233 Shank bit,
234 Eccentric segmental bit.
Side attached bit
235 Edge cutting,
Multiple
236 Pattern,
237 Gang
240 Solid,
241 Bits.
251 **Cutter guards.**
252 **Cutter hoods and dust conveyers.**
Feed and presser mechanisms
242 Miscellaneous,
243 Presser bars and chip breakers
244 Sectional,
245 Blank feeders,
Rolls
Feed
246 Miscellaneous,
247 Spring pressed,
248 Weighted,
249 Presser,
250 Sectional.
253 **Work guides.**
Wood bending
254 Bending and drying,
255 Bending rollers,
256 Presses
257 End compressors,
258 Hoop gauging,

144. WOODWORKING—Continued.

Wood bending
Former
259 Fixed
260 Collapsible,
261 End thrust,
262 Radial arm and roller,
263 Strap and windlass,
264 Strap and lever,
265 Strap and screw,
266 Strap,
267 Pivotal
268 Coiling,
269 Clamps,
270 Bends,
271 Steaming.
278 **Machine work clamps.**
279 **Glue-applying and pressing apparatus.**
280 **Glue-applying apparatus.**
281 **Veneer presses**
282 Roller,
283 Molding.
284 **Cork and bung presses.**
285 **Workbenches and tool chests combined.**
286 **Workbenches**
287 Adjustable stock rest.
288 **Work-holding stands.**
288.5 **Lath holders.**
289 **Clamps**
296 Door supporting,
291 Rectangular framework,
294 Box joint,
Miter
292 Multiple joint,
293 Single joint,
295 End and partition,
290 Bench,

144. WOODWORKING—Continued.

Clamps
297 Portable
298 Ship planking,
299 Extensible beam,
300 Parallel screw
301 Quick action,
302 Pivoted lever,
303 Straight beam adjustable jaw,
304 U beam
305 Quick action.
306 **Bench dogs**
307 Clamping,
308 Removable.
309 **Processes.**

145 WOODWORKING TOOLS.

1 **Miscellaneous.**
2 **Axes**
3 Detachable bit.
Bench planes.
5 Miscellaneous,
6 Chamfering,
7 Core box,
8 Strip cutters,
9 Flexible face,
10 Irregular work,
11 Bit adjustments
12 Angular,
Longitudinal
13 Pivoted lever and screw,
14 Screw,
15 Adjustable mouthpieces,
16 Bit clamps
17 Bits,
18 Lubricating attachments,

145. WOODWORKING TOOLS—Con.

Bench planes.
19 Handle attachments,
20 Gauge attachments.
24 **Chisels**
25 Compound,
26 Gauge.
31 **Handsaws**
32 Truss frame,
33 U frame
34 Extensible,
35 Attachments.
27 **Cue trimmers.**
115 **Tenon cutters.**
114 **Reamers.**
Augers
116 Miscellaneous,
122 Square-hole cutters,
124 Expanding, reverse taper,
125 Secondary cutters,
126 Detachable cutters,
127 Adjustable cutting lip,
123 Countersinks,
121 Sweeps,
117 Twist,
118 Pod,
119 Tubular
120 Core cutters.
128 Gauge attachments.
21 **Box openers.**
29 **Hammers**
30 Nail placers.
36 **Mallets.**
46 **Nail sets.**
50 **Screw drivers**
Shell guide
51 Spring operated,
Holding attachments
52 Side-gripping jaws.

145. WOODWORKING TOOLS—Con.

53 **Spiral-tool drivers**
Forward pressure
54 Reversible rotation.
60.5 **Bit frames.**
Bit stocks
66 Miscellaneous,
Straight
67 Side-driving shaft,
U-crank arm
68 Speeding gear,
69 Angular bit shaft,
70 Ratchet
71 Straight-crank arm,
72 Pivoted pawls,
73 Sliding pawls
74 Changeable face.
Saw handles
108 Miscellaneous,
109 Double grip,
Spindle
110 Side-clamping plates,
111 Transverse socket and tightening bar,
112 Longitudinal socket and tightening bar,
113 Scroll.
61 **Handles**
62 Magazine
63 Registering chambers,
Hollow
64 Retractile tool,
65 Crossbar
77 Ratchet,
75 Ratchet and pawl,
76 Ratchet clutch,
78 Shield attachments.
129 **Guides.**

Processes

220 Of treating non food and non beverage materials,
221 Egg opening and separating,
222 With classifying, separating, assorting, or arranging of cut or comminuted material,
223 With use of vacuum or suction; pressure fluids introduced internally; sudden release of fluid pressure,
224 With orienting,
225 With use of centrifugal force,
226 With tumbling, agitating, dropping, or vibrating,
227 With heating, cooling, fluid, chemical, electrical, wave or radiant energy treatment
228 Freezing or treatment of frozen material,
229 Flame contact or carbonizing,
230 With use of solid work treating agent
231 With precedent temperature, fluid or chemical treatment.
232 Sequentially applied chemicals or fluids
233 One a neutralizer for another,
234 One an alkaline agent,
235 Use of chemicals or fluids other than air, steam, or water,
236 Juice or juice cell removal,
237 With cracking, crushing, squeezing, twisting, or tearing,
238 Seed, pit, stem, or core removal,
239 Comminution or disintegration,
240 Dicing,

Processes.

241 Slicing or peeling or skinning,
242 Miscellaneous.
1 **Miscellaneous.**
2 **Egg cutters and separators.**
3 **Citrus fruit.**
4 **Green-corn shellers.**
5 **Banana.**
6 **Pineapple.**
7 **Coconut.**
Nutcrackers
8 Power operated
9 Centrifugal impact,
10 Cutters,
11 Rotary crusher,
12 Reciprocating jaw,
13 Hand operated
14 With receptacle,
15 Reciprocating hammer,
16 Reciprocating jaw.
17 **Seeders and stoners**
18 Cherry
19 Punch,
20 Rotary disk,
21 Hand tool.
22 Raisin
23 Coacting roll or belt,
24 Punch,
25 Squeezer,
26 Hand tool.
27 Olive punch
28 Peach
29 Tray spreader,
30 Stationary knife,
31 Hand tool.
32 **Nut skinners or blanchers.**

33 **Parer, corer, and segmenter.**
34 With doffer.
35 **Parer, corer, and slicer**
36 With doffer.
37 **Parer and slicer.**
38 **Parer and corer**
39 With doffer.
40 **Corer and segmenter.**
42 **Corer and slicer.**
43 **Peeler or parer**
44 Peach,
45 With doffer,
46 Conveying roaster,
47 Conveying washer or scalder,
48 Vacuum skinner,
49 Abrader,
50 Washer,
51 Feeders.
52 **Corer.**
54 **Berry huller, hand.**
55 **Fruit stemmer.**
56 **Fruit pricker.**
Potato-planter type
57 Rotary cutter,
58 Reciprocating cutter,
59 Stationary cutter.
Dispenser
60 Stationary cutter or comminutor,
61 Rotary cutter or comminutor,
62 Reciprocating cutter or comminutor,
63 Pivoted cutter or comminutor.
64 **Tub or block**
65 Trip-action cutter,
66 Rocking cutter,
Rotary cutter
67 Horizontal axis,

Tub or block.
Rotary cutter
68 Vertical axis,
69 Vertical reciprocating cutter.
70 **Haystack.**
71 **Corncob splitter.**
71.5 **Grain slicers.**
72 **Halving cutter**
73 Rotary knife.
74 **Rotary cutter or comminutor and sheller**
75 Ear separator or husker.
76 **Disintegrator and separator.**
77 **Combined knife and saw.**
78 **Cutters in series.**
79 **Cutter and comminutor in series.**
80 **Rotary cutter and grater.**
81 **End cutters**
81.5 Cigar,
82 Bunching,
83 Onion,
84 Ear corn,
85 Beet,
86 Bean pod.
87 **Endless cutter**
88 Band.
Rotary hollow drum cutter or comminutor.
89 Horizontal axis
90 Internal feed,
91 Hopper
92 Follower feed,
93 Vertical axis.
Rotary knife
94 Slice arranger,
95 Horizontal axis
96 Spaced knives.

146. VEGETABLE AND MEAT CUTTERS AND COMMINUTORS—Continued.

Rotary disk cutter
Transverse axis
98 Spaced cutters,
99 Plural, angled axes,
Longitudinal axis
100 Rind remover,
101 Rotary cutter carrier,
102 Reciprocating carriage,
103 Swinging cutter carrier,
104 Reciprocating cutter carrier,
105 Vertical axis.
106 **Rotary cutter or comminutor**
107 Fan conveyor,
108 Longitudinal axis
109 Belt and roller feed,
110 Belt feed,
111 Rake feed,
112 Roller feed,
113 Follower feed,
114 Hopper
115 Follower feed,
116 Without feed,
117 Transverse axis
118 Belt and roller feed,
119 Belt feed,
120 Roller feed,
121 Without feed,
Hopper
122 Plural rotary comminutors,
123 Single rotary comminutor,
124 Vertical axis
125 Follower feed,
126 Cone comminutor,
127 Diagonal axis,
128 Hand supported.

146. VEGETABLE AND MEAT CUTTERS AND COMMINUTORS—Continued.

129 **Cutters**
130 Rind removers,
131 Compound movement
132 Belt and roller feed,
133 Belt feed,
134 Rake feed,
135 Roller feed,
136 Bed feed,
137 Follower feed,
138 Without feed
139 Plural spaced knives.
140 **Swinging cutter, single pivot**
141 Transverse pivot,
142 Rake feed,
143 Roller feed,
144 Bed feed,
145 Follower feed,
146 Without feed
147 Plural spaced knives.
Transversely reciprocating cutter in vertical plane
148 Diagonal cutter,
149 Without feed
150 Knife guides.
151 **Transversely reciprocating cutter in horizontal plane.**
152 **Inclined reciprocating cutter.**
Vertical reciprocating cutter
153 Spaced blades,
154 Belt and roller feed,
155 Belt feed,
156 Rake feed,
157 Roller feed,
158 Follower feed,

146. VEGETABLE AND MEAT CUTTERS AND COMMINUTORS—Continued.

Vertical reciprocating cutter
159 Without feed
160 Plural cutter.
Diagonal reciprocating cutter
161 Without feed.
162 **Stationary cutter**
163 Endless plunger,
Rotary plunger
164 Horizontal axis,
165 Vertical axis,
Rotary holder
166 Horizontal axis,
167 Vertical axis,
168 Reciprocating carrier,
169 Reciprocating or swinging plunger,
170 Without feed
171 Slicer.
Strainer
172 Agitating plunger
173 Oscillating on horizontal axis,
174 Rotating on horizontal axis,
175 Rotating on vertical axis,
176 Reciprocating or swinging.
177 **Graters**
178 Reciprocating comminutor,
Stationary
179 Reciprocating holder,
180 Without operating mechanism.
Rotary grinder or comminutor
181 Separately movable comminutor and feed,
182 Horizontal axis
183 Twin comminutors.
184 Coacting comminutor and casing projections,

146. VEGETABLE AND MEAT CUTTERS AND COMMINUTORS—Continued.

Rotary grinder or comminutor
Horizontal axis
Screw
185 Perforated discharge cone,
186 Perforated discharge disk
187 Rotary cutters in series,
188 Rotary cutter outside,
189 Rotary cutter inside,
190 Annular discharge
191 Rotary cutter outside,
192 Vertical axis.
193 **Cleaner and assorter.**
194 **Conveying washer or scalder.**
Washer or scalder
Tanks in series
195 Dipper,
Tank
196 Dipper,
197 Agitator.
198 **Egg washer.**
Washer
199 Conveying brush,
200 Tank
201 Brush.
202 **Conveying brush.**
203 **Hand tools**
204 Compound,
213 Mashers,
214 Work tables.
215 **Cutting blocks and boards.**
216 **Clamps**
217 For slicing machines,
218 Stationary.
219 **Processes.**

147 COOPERING.

1 Barrel-making machines.
6 Heading machines.
2 Setting-up machines.
3 Setting-up formers.
4 Barrel-compressing machines
5 Cone.
49 Truss hoops.
Hoop drivers
7 Miscellaneous,
8 Cam operated,
9 Hydraulic and steam,
10 Lever operated,
11 Screw operated,
12 Weight.
Crozing and chamfering barrels
Clamped barrel
13 Rotary cutter head,
Rotating barrel
14 Expansible cutter head,
15 Rotary cutter head,
16 Sliding tool,
17 Swinging tool,
24 Hand crozes.
Crozing staves
18 Miscellaneous,
Rotary cutter
19 Endless stave carriage,
20 Sliding stave carriage,
21 Swinging stave carriage,
22 Swinging,
23 Sliding knife.
Jointing staves
25 Miscellaneous,
Inclined molding heads
26 Vertically movable bed,

147. COOPERING—Continued.
Jointing staves
Rotary cutter
27 Pattern feed,
28 Converging saws,
29 Disk cutter head,
Single saw
30 Sliding carriage,
31 Tilting carriage,
32 Slicing knife,
33 Sliding plane,
Traveling saw
34 Curved guide,
35 Longitudinal cutter cylinder.
35.5 Shaping staves.
Barrel-head making
36 Miscellaneous,
Fixed chuck
37 Rotary scribing tool,
38 Rotary saw,
Rotary chuck
39 Chisel cutter,
40 Double molding cutter,
41 Hand scribers.
42 Chamfering tools.
Hoop machines
43 Miscellaneous,
44 Racking,
45 Lapping and pointing,
46 Lock cutting.
47 Basket forming and nailing.
48 Basket forming.

148 METAL TREATMENT.

1 Miscellaneous.
2 Casting, working, and heat treatment.
3 Casting and heat treatment.
4 Solid metal
5 Removing metal coating from scrap.
6 Coating
6.5 Iron
7 With heat,
8 Cleaning and pickling,
9 Cutting by heat,
10 Electrical,
11.5 Working and heat treatment
12 Iron and its alloys,
13 Heat treatment
13.1 With special compositions
13.2 Copper and its alloys,
14 Iron and its alloys
15 Fused,
16 Gaseous
17 Carbonaceous,
18 Liquid,
19 Carbonaceous,
19.9 With fluid
20 Iron and its alloys
21 Liquid,
21.1 Aluminum and its alloys,
21.2 Copper and its all
21.3 Magnesium and its alloys,
21.4 Lead and its alloys,
21.5 Iron and its alloys
21.6 Manganese steel,
21.7 Cast iron
21.8 Malleable.

148. METAL TREATMENT—Continued.
Solid metal
22 Compositions
23 Fluxing
24 Metallic,
25 Oleaginous,
26 Inorganic,
27 Heat treating
28 Liquid
29 Oleaginous,
30 Carbonaceous.
31 Stock
32 Nonferrous.

149 HIDES, SKINS, AND LEATHER.

8 Apparatus
19 Endless belts,
16 Helical tools,
24 Preparing furs
25 Coarse-hair removing
26 Clipping,
27 Plucking.
27.5 Coloring and carroting,
20 Putting out and stretching
21 Stretching frames,
17 Reciprocating tools
18 Rocking frames,
23 Rolling,
14 Rotary cylinders,
15 Rotating tools,
12 Tables and frames,
13 Tanners' tools,
9 Tanning,
11 Tumbling drums,
10 Vats.
Processes and compositions
3 Bating,
7 Coloring and polishing,
6 Currying,
2 Depilating,
28 Preparing furs,
1 Preserving,
4 Tanning,
5 Tawing.

150 CLOTH, LEATHER, AND RUBBER RECEPTACLES.

0.5 Miscellaneous.
Portemonnaies and pocketbooks
35 Combination,
36 Puzzle and secret compartment,
37 Coin holding,
38 Bill holding,
39 Card and ticket cases,
40 Key pouches,
41 Stamp books,
34 Article holding,
28 Body construction
29 U-frame,
30 Gussets and partitions,
31 Stays and braces.
32 Blanks,
33 Handles,
42 Closures
43 Band or strap,
44 Collapsible walls,
45 Folding frame,
46 Hinged lid,
47 Safety attachments.
13 Mail bags
14 Multiple pockets,
15 Closures
16 Pivoted jaws,
17 Collapsible frame
18 Quadrangular,
19 Folding flap,
20 Manifold, locking tongue,
21 Folding flap
22 Corner fold,
23 Fasteners
24 Tongue and staple,

150. CLOTH, LEATHER, AND RUBBER RECEPTACLES—Continued.

Mail bags
Fasteners
25 Stud and keyhole slot,
26 Pivoted catches, sliding bar,
27 Turn bolt with catches.
1 Bags
1.5 Golf-bag type,
1.6 Brief-bag type,
1.7 Shopping-bag type,
1.8 Clothespin-bag type,
2 Harvesting,
2.1 Thermal material
2.2 Article or member inclosing
2.3 Head or face,
2.4 Limb,
2.5 Multi-compartment,
2.6 With attaching means,
2.7 Internal bag spreaders.
3 Closures
4 Pivoted jaws,
5 Parallel bars,
6 Folding bar and clamp,
7 Folding flap,
8 Mouthpiece, cap, or stopper,
9 Valve type,
10 Expanding spring,
11 Shirring cords,
12 Handles.
48 Baskets and buckets
49 Folding frame,
50 Rigid bottom,
51 Rigid frame.
52 Covers and cases
53 Collar and cuff,
54 Tire and wire coil.

151 NUT AND BOLT LOCKS.

1 Flowing metal.
2 Coupled nut and bolt
27 Top stop
28 Positive lock
29 Side,
30 Thread gripper,
14 Thread lock
15 Superposed nuts
16 Oppositely threaded
17 Key or pawl locked,
18 Side locked.
19 Cam or cone grip,
20 Canted nut,
21 Distorted nut,
22 Distorted thread,
23 Longitudinal key,
24 Radial key or gib,
25 Side clutch,
26 Tangential key,
3 Flexible washer,
4 Flexible key,
5 Cross key
6 Spring seated,
7 Elastic gripping action,
8 Longitudinal key,
Pawl and ratchet
9 Bolt-carried pawl,
10 Nut-carried pawl
11 Flexible,
12 Pivoted,
13 Washer-carried pawl,
31 Wedged slotted bolt.
32 Locked bolt.

151. NUT AND BOLT LOCKS—Contd.

33 Locked nut
34 Base clutch
35 Biting tooth
36 Coiled washer,
37 Nut carried,
38 Friction,
39 Pawl and ratchet
40 Nut-carried pawl,
41 Yielding interlocking washer,
42 Distorted,
43 Gravity nut or washer,
44 Side lock
45 Rotatable washer
46 Bent-tongue locked,
47 Pawl locked,
48 Pawl and ratchet,
49 Flexible
50 Automatic
51 Coiled washer,
52 Spring-tongued washer plate,
53 Inelastic washer tongue,
54 Longitudinal
55 Nut held
56 Reversed nut,
57 Side pin,
58 Spike held,
59 Swinging,
60 Washer-tongue held.
61 Transversely sliding
62 Key, plate, or bar
63 Nut held,
64 Sliding washer,
65 Transversely swinging,
66 Transverse base-locking key.

152 RESILIENT TIRES AND WHEELS.

1 Spring wheels
2 With lubrication
3 Spring enclosure,
4 Cylinder and piston,
5 Deformable ground engaging part
6 With plural spring types,
7 With rubber spring,
8 With pneumatic spring
9 Annular
10 With air tanks,
11 With leaf spring
12 End secured,
13 With coil spring
14 Radial
15 Cylinder and piston supported
16 Encircled rod supported,
17 Spring encircling rigid annulus
18 With non-resilient overload stop,
19 Convertible to rigid wheel,
20 With flexible annular support,
21 Lateral thrust or tension
22 Combined spring and friction
23 Coil springs
24 Double thrust,
25 With coil springs
26 Rod encircling,
27 With balls,
28 Combined spring and friction,
29 With plural spring types
30 Rubber and pneumatic,
31 Rubber and leaf,
32 Rubber and coil
33 Annular rubber,
34 Pneumatic and leaf,

152. RESILIENT TIRES AND WHEELS—Continued.

Spring wheels
Spring encircling rigid annulus
With plural spring types
35 Pneumatic and coil
36 Annular pneumatic,
37 Leaf and coil
38 Center secured leaf,
39 End secured leaf,
40 Rubber spring
41 In shear,
42 Cylindrical
43 Transverse,
44 Blocks or balls
45 With drive
46 With separate annulus guide,
47 Annular
48 Rigid annulus enclosing,
49 Plural,
50 With separate annulus guide
51 Combined drive,
52 With drive,
53 Pneumatic spring
54 Link connected,
55 Cylinder and piston,
56 Annular
57 Rigid annulus enclosing,
58 Plural,
59 With separate annulus guide
60 Combined drive
61 Spring,
62 Links,
63 Radial,
64 Studs or lugs,
65 Through bolts,
66 Anti-creep,
67 With drive
68 Anti creep,

152. RESILIENT TIRES AND WHEELS—Continued.

Spring wheels
Spring encircling rigid annulus
69 Leaf spring
70 With braces,
71 Link connected,
72 Variously arranged,
73 Cylindrical units,
74 Transverse,
75 Straight, radial or tangential,
76 Center secured
77 With separate annulus guide
78 Combined drive,
79 Reversely curved,
80 End secured
81 Single end,
82 With separate annulus guide
83 Combined drive,
84 Oppositely curved pairs,
85 Reversely curved springs,
86 Arcuate,
87 Coil spring
88 Link connected,
89 Variously arranged
90 Tangential and radial,
91 Diagonal,
92 Circumferential,
93 Tangential,
94 Transverse
95 Center secured
96 Concentric with wheel axis,
97 Radial
98 Tandem, interposed bearing,
99 Telescoping cylinder supported,
100 Cylinder and piston supported
101 With separate drive,
102 Double acting,

152. RESILIENT TIRES AND WHEELS—Continued.

Spring wheels
Spring encircling rigid annulus
Coil spring
Radial
103 Encircled rod supported
104 With independent annulus guide and drive,
105 With separate annulus guide
106 Combined drive
107 Spring,
108 Links,
109 Radial,
110 Studs or lugs,
111 Through bolts,
112 With separate drive.
151 Tires, resilient
152 Emergency,
153 With cooling devices,
154 With splash guards,
155 Cushion and pneumatic combined
156 Metallic spring cushion,
157 Enclosed cushion
158 Internal buffers,
159 Superimposed
160 Plungers,
161 Edge secured cushion,
162 Guide flanges
163 Radial stops
164 Bolts or studs,
165 Integral
166 With removable inner tube,
Armored
167 Anti-skid
168 Radial filaments and laminations,
169 Secured into casing,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Armored
Anti-skid
170 Detachable
171 Linked mat
172 Tire secured,
173 With circumferential band
174 Bound to felly,
175 Tire secured
176 Inlaid tread,
177 With securing rings,
178 Sectional
179 Tire secured,
180 Wholly metallic
181 Bound to felly,
182 Tire secured
183 Corner connected sections,
184 With securing rings,
185 External
186 Bound to felly,
187 Tire secured
188 Inlaid tread,
189 With securing rings,
190 Sectional
191 Tire secured,
192 Single tube tires, internal
193 Metal
194 Plates,
195 Inner tube construction,
196 Casing construction
197 Embedded
198 Metal
199 Plates,
200 Annular,
201 Linked mat,
202 Woven,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Armored
203 Interliners
204 Cotton, fabric or rubber,
205 Metal
206 Scale armor,
207 Annular,
208 Anti-skid devices
209 Treads
210 With embedded anti-skid
211 Flush with tread,
212 Radial filaments and laminations,
213 Applying and removing devices
214 Vehicle carried
215 Running board carried,
216 Wheel carried,
217 Tighteners
218 Radial,
219 Circumferential,
220 Plural tire,
221 Flexible straps or cords
222 With metal anti-skid,
223 Combined cross chains and plates or bars
224 Superimposed,
225 Plate or bar type
226 With traction lugs
227 Flanges
228 Integral,
229 Calks
230 Integral,
231 Cross chain type
232 Independent sections
233 Securing devices
234 Felly and spoke
235 Spoke clamped,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Anti-skid devices
Cross chain type
Independent sections
Securing devices
236 Felly
237 Bound to felly,
238 Spoke,
239 Annular
240 With side anti-skid elements,
241 Securing devices
242 Securing rings,
243 Modified links
244 Solid,
245 With protectors,
246 Cushion
247 Metallic springs
248 Tubular
249 Integral,
250 Woven,
251 Wheel encircling band
252 With supporting springs
253 Leaf
254 Circumferentially extending
255 Center secured,
256 End secured
257 Single end,
258 Transverse
259 Enclosed,
260 Rim secured,
261 Coil
262 Radial
263 Enclosed
264 Annular guide flange,
265 Integral enclosure
266 Arcuate interior surface,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Cushion
Metallic springs
Wheel encircling band
267 Enclosed
268 Integral enclosure
269 Arcuate interior surface,
270 Leaf
271 Circumferentially extending
272 Center secured,
273 End secured
274 Single end,
275 Transverse
276 Embedded,
277 Enclosed
278 Rim secured
279 Retaining ring secured,
280 Rim secured
281 Rim flange engagement,
282 Radial securing means,
283 Retaining ring secured,
284 Coil
285 Circumferential
286 Embedded,
287 Enclosed
288 Arcuate interior surface,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Cushion
Metallic springs
Coil
289 Radial
290 Sectional tire units
291 With plungers,
292 With plungers,
293 Enclosed
294 Annular guide flange.
295 Sectional tread,
296 Integral enclosure
297 With nonmetallic band,
298 Arcuate interior surface
299 With non-metallic band,
300 Sectional
301 Annular
302 Superimposed,
303 Superimposed,
304 With apertured external binders,
305 Radial bolt secured,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Cushion
Sectional
306 Abutting sections
307 With annular internal binders,
308 Interfitting,
309 Indented at joints,
310 Casing enclosed core
311 Separate core
312 Removable
313 Sponge rubber,
314 With core compression,
315 Superimposed rings,
316 Sectional transversely
317 Balls,
318 Integral structure
319 Recessed
320 Chambered,
321 Perforated,
322 Chambered,
323 Integral
324 With recesses
325 Chambered,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Cushion
Integral
326 With perforations,
327 Chambered
328 Multiple
329 Annular,
330 Pneumatic
331 Multiple chamber
332 Cylinder and piston,
333 Transverse walls
334 Mutually free walls
335 Interfitting,
336 Balls,
337 With simultaneous inflating means,
338 With simultaneous inflating means,
339 Annular chambers
340 Mutually free walls
341 With simultaneous inflating means,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Pneumatic
Multiple chamber
Annular chambers
342 With simultaneous inflating means,
343 Sectional casings
344 Circumferential
345 Rigid inner sections,
346 Self healing
347 With material,
348 Compression,
349 Inner tubes
350 Fabric reinforced,
351 Casing and inner tube anti-creep,
352 External shape
353 Sidewall,
354 Carcass material arrangement
355 Combined materials,
356 Cord,
357 Carcass materials
358 Woven, braided, or knit,
359 Cord,
360 Ply cushions,
361 Breaker strips,
362 Beads,
363 Casing closures
364 Positive,
365 Flaps,
366 With rim bands,
367 Patches
368 Mechanically secured
369 Inside and outside, bolt connected,
370 With plugs,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Patches
371 Bandages
372 Mechanically secured
373 To felly or rim,
374 Arrangement of rubber materials,
375 Wheel securing means
376 Plural tire,
377 Retracting wheel section,
378 Integral rims
379 Interlocking tire and rim
380 Tire embraced rim,
381 Deep channel rim,
382 Clincher rim
383 Pneumatic tire,
384 With anti-creep lugs,
385 Axial,
386 Radial
387 With circumferential tire incorporated clamps,
388 With annular tire incorporated clamps
389 With mechanically joined ends
390 Adjustable
391 Pneumatic tire,
392 Adjustable,
393 Reinforced tire base structure
394 Metallic external base ring,
395 With annular exterior clamps,
396 Separable rim parts
397 Exterior clamps
398 Lateral acting,
399 Interior clamps
400 Spreaders
401 Combined sectional channel,

152. RESILIENT TIRES AND WHEELS—Continued.

Tires, resilient
Wheel securing means
Separable rim parts
402 Sectional channel
403 Duplicate sections
404 Pneumatic tire,
405 Pneumatic tire
406 Split side flange
407 End connected,
408 With rim engaging end lugs,
409 Locking ring secured
410 Split locking ring,
411 Overlapping section
412 Bayonet or threaded joint,
413 Bayonet or threaded joints,
414 Hinged section,
415 Inflating devices
416 Vehicle body carried supply
417 Rotary joints,
418 Wheel carried supply
419 With positive pump operating means
420 Gearing,
421 Cam
422 Eccentric bearing,
423 Obstacle
424 Ground
425 Casing interposed
426 Casing enclosed pump,
427 Combined wheel and valve stem
428 With dust cap,
429 Combined tire and valve stem
430 Reinforcements or patches,
431 Combined valve stem cap and tool.

153 METAL BENDING.

1 **Binding and covering**
1.5 Shoe-lace tipping.
Pipe expanders and flangers
79 Nontraveling
80 Segmental expander,
80.5 Traveling
81 Rotary
82 Wedge feed.
2 **Combined operations**
3 Angular bending and curving
4 Pivoted bender
5 Changeable former,
6 Angular bending and twisting,
7 Curving and corrugating
8 Hammer action.
9 **Beading and crimping rolls.**
10 **Miscellaneous.**
11 **Angular**
12 Combined reciprocating bender and pivoted side shaper,
13 Combined reciprocating bender and sliding side shaper,
15 Pivoted bender
16 Bed-clamped work
17 Multiple side
18 Inclosed forms,
19 Rotary,
20 Bender-attached work,
21 Reciprocating bender
22 Inclosed forms,
23 Pan-shaped-dies,
24 Screw operated,
25 Bed-clamped work
26 Rotary,
27 Rotary bending head,

153. METAL BENDING—Continued.

Angular
28 Roll
29 Flanging
30 Tinners' rolls,
31 Pivoted table.
32 **Curving or straightening**
33 Combined reciprocating bender and pivoted side shaper,
34 Combined reciprocating bender and sliding side shaper,
35 Stretching,
36 Traveling flexible core,
37 Flier frame,
38 Three-point jacks,
39 Pivoted bender
40 Bender-attached work
41 Beading and curving,
42 Beading or tube forming,
43 Traveling bed,
44 Opposing jaws,
45 Sweep arm
46 Stationary clamped work,
47 Variable die face,
48 Reciprocating bender
49 Inclosed forms,
50 Automatic bend detector,
51 Variable die face,
52 Laterally traveling,
53 Screw operated,
54 Roll
55 Hoop,
56 Angle bar
57 Sectional rolls,
58 Barrel shaped,
59 Edge curling,
60 Skewed,

153. METAL BENDING—Continued.

Curving or straightening
Roll
61 Inclosed-work releasing,
62 Boiler formers,
63 Flexible cores.
64 **Coiling**
64.5 Flat wire, edge winding,
65 Shunt guide,
66 Spiral die,
67 Traveling guide or mandrel.
68 **Corrugating**
69 Tubes
69.5 Elbow bending,
70 Longitudinal bend,
71 Spiral bend,
72 Roll,
73 Transverse bend,
74 Bed and cylinder,
75 Pivoted bender,
76 Reciprocating bender,
77 Roll.
78 **Twisting.**

154 LAMINATED FABRIC AND ANALOGOUS MANUFACTURES.

1 **Miscellaneous apparatus.**
2 **Miscellaneous processes.**
2.21 **Electric conductor making and/or jointing**
2.22 Joining, splicing, or repairing,
2.23 Plugging and sealing,
2.24 Multiple conductor or conductor strand,
2.25 Covering
2.26 With preformed material
2.27 Applying plural preformed materials,
2.28 With liquid or plastic application.
2.5 **Electrical insulation making**
2.6 Processes and fabrics.
2.70 **Laminated glass making**
2.71 Edge sealing or treating,
2.72 Platen presses,
2.73 Processes and products only
2.74 Non-coextensive or non-uniform interlayer,
2.75 Synthetic resin containing interlayer
2.76 With regenerated cellulose, cellulose ester or ether,
2.77 Polyvinyl or polyacrylyl resin,
2.78 Rubber, natural resin or protein containing interlayer
2.79 With regenerated cellulose, cellulose ester or ether,
2.80 Regenerated cellulose, cellulose ester or ether containing interlayer,
2.81 Manipulative processes.

154. LAMINATED FABRIC AND ANALOGOUS MANUFACTURES—Continued.

3 **Belt making**
4 Processes.
5 **Hose making**
6 Axial feed,
7 Convolute wind,
8 Processes.
9 **Tire making**
10 Fabric-structure building,
11 Thread-structure building,
12 Processes
13 Filling feature,
14 Pneumatic
15 Puncture-closing type.
16 **Ball making**
17 Golf ball
18 Filling feature,
19 Winding feature.
20 **Linoleum making**
21 Inlaid
22 Pattern forming
23 From plastic masses,
24 From sheets,
25 Processes
26 Inlaid.
27 **Heat-insulating covering making**
28 Processes.
29 **Yielding-fabric making**
30 Corrugating and indenting
31 Facing feature,
32 Facing corrugated and indented structure,

154. LAMINATED FABRIC AND ANALOGOUS MANUFACTURES—Continued.

Yielding-fabric making
33 Processes
33.05 Corrugating, indenting or facing.
33.1 **Joint packing making.**
34 **Fabric parchmentizing and uniting.**
35 **Fabric coating and uniting**
36 Sheet and web,
37 Webs
38 Roofing
39 Sanding feature,
40 Processes.
41 **Affixing fabric coverings.**
42 **Adhering-seam forming.**
43 **Miscellaneous structure.**
43.5 **Puncture healing.**
44 **Heat-insulating coverings**
45 Air spaced.
45.9 **Composite boards.**
46 **Fabrics**
46.5 Matrix stock,
47 Decorative,
48 Elastic,
49 Floor,
50 Waterproof
51 Roofing,
52 Wear and strain resisting
52.5 Penetration resistant,
53 Wire reenforced,
54 Yielding
54.5 Impression surface,
55 Corrugated and indented,
56 Stair pads.

155 CHAIRS AND SEATS.

1 Miscellaneous.
2 Special
3 School desk and seat type
4 Adjustable desk tops,
5 Vehicle
5.10 Velocipede
5.11 Combined,
5.12 Auxiliary
5.13 Front,
5.14 Sectional,
5.15 Pneumatic,
5.16 With back or body rest,
5.17 With yieldable support
5.18 Fluid,

155. CHAIRS AND SEATS—Continued.
Special
Vehicle
Velocipede
With yieldable support
5.19 Reciprocating post,
5.20 Linked or pivoted,
5.21 Cantilever or C spring,
5.22 With spiral spring,
5.23 Bodies and covers,
5.24 Posts.
6 Convertible seats and berths
7 Carriage type,
8 Reclining,
9 Shock absorbing or spring,
10 Auxiliary seats
11 Seat attachments,

155. CHAIRS AND SEATS—Continued.
Special
Vehicle
Auxiliary seats
12 Rear
13 Forwardly swinging links,
14 Shifting horizontally
15 Plurality of seats,
16 Grip handles,
17 Baby jumpers
18 Vertically swinging arms,
19 Horizontally moving supports,
20 Body supports,
21 Adjustable backs or leg rests,
22 Walkers' or skaters' supports
23 Horizontally moving supports,
24 Body supports,

155. CHAIRS AND SEATS—Continued.
Special
25 Dental or barber
26 Angularly adjustable seats,
27 Revolving,
28 Surgical and invalid type
29 Inclined beds,
30 Rolling,
31 Commode chairs,
32 Disappearing,
33 Aisle forming,
34 Duet piano stools,
35 Shoe salesmen's,
36 Photographers',
36.5 Bathtub,
37 Body attached.

155. CHAIRS AND SEATS—Continued.

Special

38 Convertible high and low
39 Chair on top of table,
40 Rocking.
41 **Convertible**
42 Stepladders,
43 Tables,
44 Cribs,
45 Beds
46 Extensible laterally,
47 Rearwardly folding extensible backs,
48 Sectional seats
49 Rearwardly folding backs.
50 **Spring supported**
51 Bracket supported,
52 Pedestal supported,
53 Backs and seats,
54 Oscillating seats
55 Pivoted at front or back.
56 **Oscillating**
57 Rolling or sliding,
58 Swings
59 Motor operated,
60 Oscillating frames,
61 Suspending means below seat,
62 Plurality of seats
63 Operating means,
64 Separately suspended seats,
65 Operating means,
66 Sofas, settees, or lounges,
67 Hammock seats,
68 Adjustable or folding seats,
69 Rocking
70 Operating means
71 Platform
72 Convertible to nonrocking,
73 Convertible to nonrocking
74 Detachable rockers,

155. CHAIRS AND SEATS—Continued.

Oscillating

Rocking
75 Folding
76 Adjustable,
77 Tilting.
78 **Bracket supported**
79 Auxiliary seats,
80 Vertically swinging brackets,
81 Horizontally swinging brackets,
82 Vertically adjustable brackets,
83 Folding seats
84 Seats actuating other elements,
85 Opera-chair type
86 Chairs in row,
87 School desk and seat type.
88 **Vertically adjustable**
89 School desk and seat type,
90 Tilting,
91 Toggles or lazy tongs,
92 Vertical screw
93 Pedestal,
94 Pedestal.
95 **Revolving**
96 Car-seat type
97 Plurality of seats.
98 **Reversible**
99 Interchangeable back and seat,
100 Reclining,
101 Walk-over backs
102 Foot rests,
103 Reversible backs
104 Foot rests.
105 **Reclining**
106 Interconnected back and leg rest
107 Synchronously moving head rest,
108 Stationary seat frame
109 Leg rest operated by moving arm rests,

155. CHAIRS AND SEATS—Continued.

Reclining

Interconnected back and leg rest
110 Leg rest operated by moving arm rests,
111 Horizontally moving leg rests.
112 **Sofas, settees, and lounges**
113 Angularly adjustable ends,
114 Box couches.
115 **Adjustable seats**
(Vertically adjustable, see subs. 88-94.)
116 Angularly adjustable backs
117 Folding chairs,
118 Independently movable,
119 Flexible back and seat,
120 Angularly
121 Laterally,
122 Moving laterally.
123 **Combined tables and chairs**
124 Table in front of chair
125 Enlarged arms,
126 Table swinging vertically,
127 Table supported on both chair arms,
128 Table supported on brackets,
129 Bottoms.
130 **Combinations of two or more seats**
131 Auxiliary seating devices
132 Convertible,
133 Circus-seat type.
134 **Pedestal supported**
135 Folding
136 Crossed legs,
137 Folding legs,
138 Radiating arms or legs.
139 **Folding chairs**
140 Laterally,
141 Integral rear legs and back,

155. CHAIRS AND SEATS—Continued.

Folding chairs

142 Integral front legs and back
143 Crossed legs
144 Pivoted back,
145 Arm rests,
146 Sliding legs.
147 Crossed legs,
148 Parallel legs.
149 **Folding stools**
150 Crossed legs,
151 Parallel legs.
152 **Folding and adjustable backs**
153 Beach-seat type
154 Angularly adjustable,
155 Pivoted on forwardly extending arms,
156 Pivoted above seat,
157 Adjustable supporting post,
158 Not pivoted to seat,
159 Adjustable arms,
160 Adjusting means at pivot,
161 Adjusting means below pivot,
162 Adjusting means behind back,
163 Adjusting means in front of back,
164 **Spring back supports.**
165 **Foot rests**
166 Kneeling stools
167 Scrubbing,
168 Radiator,
169 Independent,
170 Moving horizontally beneath seat
171 Swinging vertically,
172 Adjustable vertically.
173 **Head rests**
174 Portable
175 Body attached,
176 Changeable supporting surfaces,
177 Folding or adjustable.

155. **CHAIRS AND SEATS**—Continued.
178 **Bottoms and backs**
179 Spring
180 Upholstery covering,
181 Upholstery-supporting surfaces,
182 Covers and slip seats,
183 Changeable supporting surfaces,
184 Upholstered
185 Tufted,
186 Veneer type,
187 Flexible.
188 **Attachments**
189 Guards,
190 Garment holders.
191 **Structural details**
192 Wagon-seat type,
193 Bent wood,
194 Metal
195 Car-seat type,
196 Fastening means,
197 Bracing means,
198 Arm rests.

156 CURTAINS, SHADES, AND SCREENS.

15 **Awnings**
42 Frames,
43 Rigid, intermovable, sections,
44 Roll and reel.
Curtain
33 Holders,
22 Poles with supports,
19 Poles,
20 Poles and rings,
21 Rings and pins,
46 Theater.
32 **Curtain-cord tighteners.**
40 **Curtain tassels**
16 **Flexible blinds.**
Shade
24 Shades with brackets,
25 Fastenings,
26 Guides,
27 Hangers, vertically adjustable,
28 Raisers,
29 Rollers
30 Dropping,
34 Friction brake,
35 Ratchet and pawl,
36 Spring,
31 Sticks.
23 **Shade and curtain hangers.**
17 **Venetian blinds.**
13 **Window cornices.**
14 **Window screens**
37 Exits,
38 Extensible,
39 Rolling
10 **Window shades.**

157 WHEELWRIGHT-MACHINES.

1 **Miscellaneous.**
2 **Rim compressors.**
3 **Spoke setters**
4 Work holders and guides.
5 **Tire setters**
6 Rubber tires.
7 Trestles and tanks.
8 **Tire tighteners**
9 Felly expanders
10 Spoke clamping.
11 **Tire removers.**
12 **Spoke extractors.**

158 LIQUID AND GASEOUS FUEL BURNERS.

1 **Furnaces**
2 Combined door and burner,
3 Locomotive type,
4 Liquid fuel
4.5 Regenerative,
5 Retort
6 Gas making,
7 Gas
7.5 Regenerative
7.6 Separate flues,
1.5 Air-admission directors.
8 **Coal-stove attachments**
9 Lid burners.
10 **Fire kindlers**
11 **Combined oil and gaseous fuel.**
12 **Combined gas and coal.**
13 **Combined gas and water vaporizers.**
13.6 **Self-heating tools**
14 Branding irons
15 Gas,
16 Hydrocarbon reservoir,
17 Burning tools
18 Gas,
19 Hydrocarbon reservoir,
20 Curling irons
21 Hydrocarbon reservoir,
22 Roll-heating type,
23 Sadirons
23.1 Gas,
23.2 Hydrocarbon reservoir,
24 Soldering irons
25 Solder feeders,
26 Gas,
27 Hydrocarbon reservoir.
27.4 **Blowpipe**
27.5 Flame-deflecting jet
27.6 With pressure generator.

158. LIQUID AND GASEOUS FUEL BURNERS—Continued.

Burners

28 Liquid fuel
29 Automobile
30 Gas chamber,
31 Starters,
32 Blast lamp
33 Hand torches
35 Wick type,
36 Fuel feeding
36.1 Vacuum
36.2 Snap action,
36 3 Pumps
36.4 Engine operated,
36.5 Air pressure,
36.6 Gravity,
37 Maintained oil level
38 Float controlled
39 Liquid seal,
40 Fountain feed
Removable font
41 Cut-off,
42 Vertically adjustable burner or tank,
42.1 Automatic cut-off
42.2 Air pressure,
42.3 Overflow,
42.4 Thermostatic,
43 Liquid seal,
Lamp-stove type
44 Reservoir
45 Protector and air feeding.
45.5 Steam regulation,
46 Tanks
46.5 Reserve supply,
47 Combined oil and gas,
48 Burner cut-off
49 Retracting pump,

158. LIQUID AND GASEOUS FUEL BURNERS—Continued.

Burners

Liquid fuel
Fuel feeding
Tanks
Force feed
50.1 Gas,
50.2 Liquid,
50.3 Mechanical,
51 Siphon feed,
52 Drop feed
53 Retort
54 Superheating
55 Burner cap,
56 Oil, steam, or water
57 Steam jet,
58 Additional carburetor
59 Central generator,
60 Movable vapor deflector,
61 Auxiliary heater
62 Subburner,
63 Overlying
64 Mixing chamber
65 Burner cap,
66 Underlying
67 Conducting plate
68 Mixing chamber and burner cap,
69 Mixing chamber and burner cap,
70 Mixing chamber and flame deflector,
71 Side retort,
72 Wick feed,
79 Coil,
80 Film,
81 Starter
82 Continuously operated,

158. LIQUID AND GASEOUS FUEL BURNERS—Continued.

Burners

Liquid fuel
Retort
Starter
83 Lighting cup
84 Oil-charge measuring,
85 Lighting and relighting devices,
73 Spray
74 Oil, air, and steam,
75 Oil and steam,
76 Oil and air,
77 Atomizers,
78 End nozzles,
86 Perforated combustion tube
87 Trough,
88 Wick,
89 Combustion tubes,
90 Lighting arrangements,
91 Pan or tray
92 Steam or air spray,
93 Water surface,
94 Lamp type
95 Water vaporizers,
96 Absorbent
97 Alcohol lamp,
99 Gas
100 Gas logs,
101 Acetylene,
102 Gas-jet attachments
103 Convertible.
104 Multiple
105 Independent cut-off,
106 Mixing tube,
107 Relatively adjustable,
108 Regenerative,
109 Pressure burners,
110 Concentric gas and air jet,

158. LIQUID AND GASEOUS FUEL BURNERS—Continued.

Burners

Gas
111 Laboratory type,
112 Davy-lamp diaphragm,
113 Flame deflectors,
114 Fuel distributers,
115 Lighting devices,
116 Burner caps,
117 Regulating,
Automatic cut-offs
117.1 Thermostatic
117.2 Self-setting.
117.5 Processes.
118 **Gas and air mixers**
119 Proportional.
120 **Valves and cleaners**
121 Pressure governed.

159 CONCENTRATING EVAPORATORS

1 **Miscellaneous**
2 **Superheating and pressure release.**
3 **Spray type**
4 Gaseous current.
5 **Film type,**
6 Centrifugal
7 Moving-film support
8 Gaseous current
9 Rotary drum or disk
10 Exterior surface,
11 Rotary drum or disk,
12 Inclosing chamber,
13 Moving film
14 Climbing,
15 Zigzag.
16 **Gaseous blast or current.**
17 **Multiple effects**
18 Superimposed,
19 Combined closed and open,
20 Variable or counter flow.
21 **Combined closed and open pans.**
22 **Closed evaporating chambers**
23 Indirectly heated
24 Regenerative,
25 Rotatable agitator or coil,
26 Heated tubes

159. CONCENTRATING EVAPORATORS—Continued

Closed evaporating chambers
Indirectly heated
Heated tubes
27 Vertical,
28 Heating elements,
29 Directly heated,
30 Samplers,
31 Liquid traps or separators.
32 **Open pans**
33 With rakes,
34 Tiltable, removable, or portable,
35 Interposed liquid receptacle,
36 Steam and furnace heated,
37 Steam heated,
38 Furnace heated
39 Liquid tubes in flue,
40 Flues in pan,
41 With dampers.
42 **Strainers or skimmers.**
43 **Fluid feed or discharge devices.**
44 **Automatic.**
45 **Apparatus for graining and separating crystals.**
46 **Preliminary heaters and heat economizers.**
47 **Processes**
48 Spray,
49 Film.

160 CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE

1 **Automatic control**
2 Non-thermal automatic initiator
3 Force initiated
4 Weight,
5 Weather and/or light initiated,
6 Non-fusible thermal initiator,
7 With starting or driving means,
8 With retarding means,
9 With releasing means for operator and/or counterbalance.
10 **With signal indicator or sign.**
11 **With wiper or cleaner.**
12 **With insect exits**
13 Applied to slidably interconnected frames or panels,
14 Zigzag or crimped surface,
15 Spaced or overlapping sections,
16 Conical, prismatic or other protuberances,
17 Bar, grooved or apertured.
18 **With animal blocking, repelling and/or chasing means.**
19 **With hood, canopy, shield, storage chamber or outrigged rigid panel**
20 Outrigged rigid panel, with flexible panel sides,
21 Changeable size,
22 For outrigged flexible panels (i. e., awnings),
23 For roll type
24 Portable,
25 With plural flexible or portable panels,
26 Casement housed roll
27 Fabric free edge connected to movable closure,
28 Fabric free edge connected to movable closure,
29 Movable hood, canopy, shield, storage chamber or outrigged rigid panel
30 Mounted upon movable closure,
31 Combined with frame or demountable side guides

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

With hood, canopy, shield, storage chamber or outrigged rigid panel
32 For plural strip, slat or panel and/or pleating type
33 Casement housed,
34 Venetian blind and/or collapsing,
35 Pleating or edge hinged gathering type,
36 Edge hinged, slidably mounted,
37 Slidable into storage chamber,
38 Structure
39 Extensible.
40 **With filler and filler type**
41 For roll type
42 Between outrigged roll type,
43 Between parallel plane, relatively slidable panels.
44 **With liquid supplying and/or draining means.**
45 **With outriggers (i. e., awnings)**
46 Floor or ground engaging outrigger,
47 With groove engaging mounting means,
48 With rigid closure
49 Movable rigid closure related,
50 With non-outrigged flexible panel
51 Convertible,
52 With non-outrigged roll type,
53 Umbrella type,
54 Plural outrigged type
55 One roll type,
56 Non-planar fabric arrangements
57 Planar surface, with sides
58 Sides foldable, rollable or collapsible,
59 Multi-positional,
60 Convertible,
61 Plural strip, slat or panel type
62 Telescopic and/or collapsible,
63 With fabric having diverse areas,
64 Adjustable size,
65 With braced outrigger,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

With outriggers (i. e., awnings)
66 Roll type
67 Shiftable position roll,
68 Fabric free edge connected operator,
69 Multi-part outrigger
70 Two part, intermediate pivot,
71 Telescopic,
72 Swinging outriggers
73 With pivotal motion preventing means,
74 Sliding pivot,
75 Sliding outriggers,
76 With fabric frame
77 Pivoted,
78 Multi-part outrigger
79 Two part, intermediate pivot,
80 Telescopic,
81 Swinging
82 With sliding pivot,
83 Rigid or non-movable.
84 **Pleating type.**
85 **Plural run type**
86 Endless.
87 **Plural and/or with rigid closure**
88 Non-planar, non-parallel arrangement,
89 Diverse types
90 With rigid closure
91 Diverse rigid closures,
92 Swinging rigid closures
93 Intermediate axis
94 With opposite, parallel, offset flexible panels.
95 Flexible or portable panel related to rigid closure operating or fastening means,
96 In tandem with flexible or portable panel and mounted for optional or conjoint movement,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Plural and/or with rigid closure

Diverse types
With rigid closure
Swinging rigid closures
97 Flexible or portable panel complementary to form complete closure,
98 Roll type flexible panel
99 Connected to slidable rigid closure
100 Fabric free edge connected,
101 Flexible panel between slidable parallel plane rigid closures,
102 Flexible panel connected to and moved by slidable rigid closure,
103 Flexible or portable panel related to rigid closure operating or fastening means,
104 Grille or shutter type,
105 Flexible panel removably mounted in slidable rigid closure guides,
106 Removably mounted over fabric in frame,
107 Plural strip, slat or panel type,
108 Roll and hanging or drape type only
109 Shiftable position
110 With extensible pole, roller, bar or support therefor,
111 Vertically slidable,
112 With extensible pole, roller, bar or support therefor,
113 Plural strip, slat or panel assemblies
114 Non-planar,
115 Multiple section unit
116 One closing passage through another,
117 Mounted on opposite sides of single opening
118 Track guided,
119 Mounted on opposite sides of single support,
120 Roll type
121 Single roll,
122 Differently directed fabrics,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Plural and/or with rigid closure

123 Hanging or draped type
124 Tandem arranged, on single pole or track,
125 Shiftable pole,
126 Laterally overlapping fabrics and/or co-elevational parallel tracks.
127 **Combined.**
128 **Convertible**
129 Plural movably interconnected strip, slat or panel type.
130 **Plural strip, slat or panel type**
131 Longitudinally crooked strip, slat or panel
132 Bow or U-shape, pivoted together at ends,
133 Roll type,
134 Fan type,
135 Portable,
136 Parallelogram type
137 Plural differently movable parallelogram sections with a common side,
138 With operator
139 Unit collapsing only
140 Diverse types of operators
141 One operator a spring,
142 One operator a weight
143 Weighted parallelogram element extension
144 Spring
145 In brace,
146 Weight
147 Strand carried,
148 Weighted parallelogram element extension,
149 With gearing,
150 With strand and pulley,
151 Unit carried operator,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Plural strip, slat or panel type

Parallelogram type
152 With means to hold unit in partially collapsed or collapsed position
153 Combined tension and compression means,
154 Pivoted compression bar
155 Friction catch,
156 Tension members
157 Flexible member foreshortened at end,
158 Friction catch,
159 Unit collapsing on guides,
160 Unit pivoted to support,
161 Unit structures
162 With additional set of plural strips, slats or panels
163 Plural diverse additional sets,
164 Additional set composed of interconnected strips, slats or panels,
165 Pivots parallel to unit plane,
166 Venetian blind type
167 Changeable position assemblies,
168 With accumulating means
169 Accumulated at stationary end,
170 Drum or roller wound strand
171 Axially traversed drum or roller,
172 With side guides,
173 Units and subcombinations thereof,
174 Adjustable strip, slat or panel angle
175 With latch or detent,
176 With angle adjusting means,
177 Units and subcombinations thereof,
178 Units and subcombinations thereof,
179 Plural fabrics in a single frame,
180 One closing opening in another,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Plural strip, slat or panel type

181 With mounting or supporting means
182 Removable frame type support,
183 Non-planar non-parallel arrangement on support,
184 Strip, slat or panel not interconnected for relative motion,
185 Strip, slat or panel interconnected for diverse relative motions,
186 Arranged to provide plural passageways on opening.
187 Strip, slat or panel pivotally interconnected,
188 With operating means
189 Counterbalance and additional operator,
190 Counterbalance only
191 Spring,
192 Spring,
193 Strand,
194 Movably mounted track
195 Pivotally mounted,
196 Unit hung from horizontal track
197 Strips, slats or panels slidably interconnected,
198 Track parallel to axis of interconnection pivots,
199 Strip, slat or panel constrained for pivotally folding,
200 With independently movable strip, slat or panel,
201 Track guided
202 Strips, slats or panels slidably interconnected,
203 Unit pivoted to support, pivot displaced from unit plane,
204 Track parallel to interconnection pivot axis,
205 With independently movable strip, slat or panel,
206 Strip, slat or panel constrained for pivotal folding
207 Vertical track,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Plural strip, slat or panel type

With mounting or supporting means
Track guided
208 A single strip, slat or panel connected to track,
209 With means to force against mount or support.
210 Pivotally mounted unit
211 Strips, slats or panels slidably interconnected,
212 Support pivot at angle to interconnection pivot axis,
213 Constrained for pivotal folding,
214 Slidably mounted unit,
215 Removable unit
216 Strip, slat or panel slidably interconnected,
217 Pivotal interconnection necessary to removal and insertion,
218 Movably interconnected
219 Unit having diverse areas,
220 Interconnected for plural relative motions
221 Doubly extensible by sliding only,
222 Slidably interconnected
223 Plural individually interconnected strips, slats or panels,
224 With operator and/or anti-friction means,
225 With relative slidable motion preventing means,
226 Embracing type
227 Integral embracing means,
228 Tongue, bead, bolt or dog into groove or slot,
229 Side by side interconnected
230 Single covering fabric,
231 Strand or fabric interconnected,
232 Hollow, filled or covered elements,
233 With relative pivotal motion preventing means
234 Acting to keep unit planar only,
235 By curled or bent side edges,
236 Strip or slat structure.

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

237 **With fabric having diverse areas.**
238 **Roll types**
239 Framed
240 Adjustable size frame,
241 Plural roll,
242 Shiftable position roll
243 Roll translated for winding or unwinding operation only
244 Fabric free edge adjustable,
245 Spring roller,
246 Straight line non-axial translation in fabric plane only
247 Center operated, roll support,
248 Rack and pinion operated,
249 One side, non-strand operated,
250 Extensible roller and/or roll support,
251 Step by step,
252 Strand shifted
253 Pulley or drum lift on roller,
254 Winding drum
255 With roll guide,
256 Roll intermediate guides for translating strands,
257 With position holding means
258 Strand holder
259 Roll guided,
260 Roll guided,
261 With elevator rod,
262 Crooked roll, non-cylindrical or flexible roller.
263 Adjustable dimension roll,
264 With fabric reinforcements,
265 With fabric free edge connected operator,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Roll types

266 With guides or fabric edge holders
267 Fabric side edge and stick,
268 Fabric side edge
269 Clamping,
270 Slot or channel type
271 Fabric receiving
272 Guide mounted in a channel,
273 With interlock between fabric and guide,
274 Stick guided only
275 With positive stop or detent
276 Reciprocable detent,
277 Guides of bar or strand form
278 With release mechanism,
279 Guide strand axially through or into stick,
280 Leading edge holders movable axially of stick
281 With release mechanism
282 With guide engaging rollers and friction elements
283 And roll brake,
284 With guide engaging rollers,
285 With guide engaging rollers and friction elements
286 And roll brake,
287 With guide engaging rollers,
288 With axially acting friction elements,
289 With friction elements,
290 With fabric leading edge fastening means,
291 With brake or stop
292 Plural,
293 Limit of travel
294 For spring operated roller
295 Screw operated brake or stop,
296 Speed limiting,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Roll types

With brake or stop
297 Ball or roller, form brake or stop,
298 Friction
299 For spring operated roller,
300 Pawl or detent
301 For spring operated roller
302 Spring urged pawl or detent,
303 Pawl or detent mounted off the roller,
304 Sliding pawl or detent,
305 For spring operated roller
306 With means to prevent uncoiling of spring on removal from support,
307 For strand operated roll
308 Strand operated brake or stop,
309 With rotating means
310 Electric operation or control,
311 Motor or fluid pressure control,
312 Plural, diverse,
313 Spring
314 External of roll,
315 With winding or tensioning means,
316 Nested helical springs,
317 Plural,
318 With spring anchor,
319 Strand
320 With weight or handgrip,
321 Endless,
322 With compensating and shock absorbing spring,
323 With supporting or journaling means and/or roller end structure
324 With pintle clamping or holding means,
325 With pintle journaled in roller,
326 With roller gudgeons.

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

327 **Non-framed plural edged held fabric**
328 With fabric stretching means
329 Resilient stretching means.
330 **Hanging or drape type**
331 Motor operating means or electric or fluid pressure control,
332 Chain, cable and/or stand type,
333 Shiftable position pole
334 Plural motions,
335 Swingable
336 Vertical swing,
337 With pole operating means,
338 Vertically shiftable
339 With strand operator,
340 With fabric operating means
341 Laterally gathered fabric
342 Lazy tongs,
343 Spring or screw,
344 Strand
345 Hollow or slotted track
346 With anti-friction means,
347 With anti-friction means,
348 With pleating means,
349 With bottom or intermediate holding, weighting or draping means,
350 Portable.
351 **Portable.**
352 **Non-planar (three dimension).**
353 **With plural frames.**
354 **With non-rigid frame or border elements.**

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

355 **Shiftable position**
356 With operating or counterbalancing means,
357 Plural constrained motion
358 Slidable and swingable
359 Swingable side guides,
360 Swingable
361 Intermediate pivot,
362 On horizontal axis,
363 Slidable
364 With holder, brake or transversely movable guide element
365 Spring or spring operated
366 Manually controlled,
367 With longitudinal sheet material guide members.
368 **With mounting, fastening or supporting means**
369 For framed type,
370 With guide for strand.
371 **Framed type**
372 Adjustable frame size
373 With excess or extensible fabric,
374 Double extensible,
375 Shiftable edge bar section only
376 With spring thrust,
377 Collapsible or knockdown,
378 Fabric stretching,
379 With intermediate reinforcing bars, members or braces,
380 Two superimposed frame elements, fabric clamping,
381 With corner structure.
382 **Fabric fastening means**
383 To elongated element
384 Additional things fastened,
385 With modified fabric
386 Plural layers in panel portion,
387 With fabric hem,
388 With loops,

160. CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE—Continued.

Fabric fastening means
To enlongated element
With modified fabric
389 With strips or strands,
390 With fabric openings or pockets,
391 Longitudinally divided or with fabric receiving externally exposed channel or groove
392 Internal fastener larger than groove or channel fabric exit
393 With end cap and/or sleeve,
394 Sheet material elongated element
395 Elongated fastener in channel or groove
396 With end cap and/or sleeve,
397 Sheet material elongated element,
398 With pointed, piercing and/or hook elements,
399 Externally applied clamp, clasp, sleeve or end cap,
400 Sheet or strand,
401 By sleeve and/or end cap,
402 By externally applied clamp or clasp,
403 By elongated fastener,
404 By pointed, piercing and/or hook elements.
405 **Miscellaneous, processes and manufacturing apparatus.**

161 TIME CONTROLLING MECHANISM

1 **Miscellaneous.**
Annunciators
Electric
2 Selective alarm,
3 Single alarm
4 Adjustable pin,
5 Auxiliary switch,
6 Mechanical.
7 **Valve-actuating mechanism**
10 Stock feeders,
8 Dampers,
9 Gas cocks.
11 **Lighting mechanism**
12 Electric,
14 Friction.
15 **Timing mechanism**
16 Culinary.
17 Game,
18 Speed,
19 Telephone service,
20 Watchmen's,
21 Workman's.
22 **Awakeners.**
23 **Alarms.**
24 **Time balls.**
26 **Shutter-actuating mechanism.**

162 NO CLASS

163 NEEDLE AND PIN MAKING

1 **Needle making**
2 Knitting needles
3 Tongued,
4 Rotary blank carrier,
5 Processes.
6 **Pin making**
7 Safety pins.
8 **Assorting and packaging needles and pins.**

164 CUTTING AND PUNCHING SHEETS AND BARS.

0.2 **Well tubing cutters**
0.3 Perforator or splitter
0.4 Wedge or cam slot actuated,
0.5 Explosive,
0.6 Rotary external,
0.7 Rotary internal
0.8 Fluid operated.
1 **Buttonholes**
2 Machines.
Expanded metal
6.5 Reciprocating,
6.6 Roller.
7 **Fence barbs**
8 Cutters and dies
9 Roller,
10 Processes.
10.5 **Printers' leads.**
10.6 **Scrap cutting.**
11 **Combined machines**
12 Work feeding,
13 Die cutting and punching,
14 Pivoted knife carrier,
15 Reciprocating knife carrier,
16 Roller cutter and punch.
17 **Cutting**
17.5 Sewing-machine attachments,
18 Die
19 Machines
20 Work feeding
21 Reciprocating feeder,
22 Roller feed,
23 Reciprocating crosshead
24 Shifting dies,
25 Reciprocating plunger
26 Lever operated,
27 Screw operated,
28 Roller die,

164. CUTTING AND PUNCHING SHEETS AND BARS—Con.

Cutting
Die
29 Dies
30 Spiral-strip cutting,
31 Adjustable face,
32 Multiple concentric,
33 Blank ejecting,
34 Machines
35 Band knife,
36 Fixed cutter
37 Spiral strip,
38 Work feeding
39 Roller feed,
40 Oscillating apertured cutters,
41 Pivoted cutter
42 Work feeding,
43 Transverse,
44 Lever operated
45 Work clamping,
46 Compound leverage,
47 Reciprocating cutter
48 Work feeding
49 Roller feed,
50 Notched work,
51 Automatic clamp,
52 Separately operated clamp,
53 Drawcut
54 Automatic clamp,
55 Separately operated clamp,
56 Fluid operated,
57 Lever operated,
58 Cutters and bed blocks,
59 Gauges,
60 Rotary cutter
61 Work feeding
62 Reciprocating feeder,
63 Curved-plate work,

164. CUTTING AND PUNCHING SHEETS AND BARS—Con.

Cutting
Machines
Rotary cutter
64 Notched work
65 Slitters and winders,
66 Transverse
68 Work feeding
67 Printing-press attachments,
69 Rotary work mandrel,
70 Cutters,
71 Sweep cutter
72 Elliptical work,
73 Traveling cutter carriage
74 Motor-driven cutter
75 Reciprocating,
76 Rotary,
77 Roller knife,
78 Cutting tables
79 Work clamping.
84.5 **Tearing.**
85 **Punching**
86 Machines
87 Feeding and punching
88 Reciprocating feed,
89 Roller feed,
89.5 Hand-guided motor driven,
108 Tube,
109 Tie-band tongue,
111 Punch selector
112 Keyboard controlled
113 Electrically operated,
114 Pattern controlled
115 Electrically operated,
90 Gang
91 Lever operated
92 Foot,

164. CUTTING AND PUNCHING SHEETS AND BARS—Con.

Punching
Machines
Gang
93 Pattern,
98 Printers' rules,
99 Roller
100 Printing-press attachments,
94 Hammer,
95 Hydraulic,
96 Lever operated
97 Foot,
101 Screw operated,
102 Shaft driven
103 Tilting frame,
104 Stop devices
105 Shaft clutch,
106 Stroke adjustments,
110 Strippers and hold downs,
116 Feed mechanisms
117 Reciprocating,
118 Dies and die holders,
119 Implements
120 Pivoted handles
121 Pliers
122 Turret,
123 Traveling roller,
124 Punches,
125 Processes.

166 WELLS.

1 **Miscellaneous.**
2 **Flowing.**
4 **Well casing**
5 Drive points and strainers
6 Inserted strainer plug,
7 Fabric strainer,
8 Wire wound,
9 Shoes,
10 Packers
11 Double,
12 Dog or slip type,
13 Plugs,
14 Heads
15 Controllers.
16 **Cleaning apparatus**
17 Heater,
18 Mechanical
19 Bailer,
20 Washer.
21 **Processes**
22 Cementing or plugging,
23 Cleaning
24 With detergent or chemical,
25 Formation attacking (i. e., acid treatment),
26 Graveling or porous layer forming.

167 MEDICINES, POISONS, AND COSMETICS.

13 **Poisons**
Insecticides, fungicides, germicides, and disinfectants
14 Inorganic
15 Arsenic,
16 Copper,
17 Halogen compounds,
18 Hypochlorites,
19 Mercury
20 Sulphur
21 Lime-sulphur,
22 Organic
23 Carbon disulphide,
24 Plant extracts and powders
25 Essential oils,
26 Formaldehyde,
27 Oils and waxes
28 Mineral oils
29 Tars,
30 Carbocyclic compounds
31 Phenolic,
32 Naphthalene,
33 Heterocyclic compounds
34 Nicotine,
35 Cyanogen compounds,
36 Animal dips and sprays,
37 Mothproofing
38 Seed disinfecting,
38.5 Wood, paper, hide, leather or textile saturant
38.6 Organic material containing
38.7 Phenol or derivative,
39 Fumigants
40 Combustible
41 Candles,

167. MEDICINES, POISONS, AND COSMETICS—Continued.

Poisons.
Insecticides, fungicides, germicides, and disinfectants
42 Suspending agents, adhesives, and spreaders,
43 Oil emulsions,
45 Herbicides,
46 Animal poisons,
47 Warfare gases.
48 **Baits.**
49 **Limes.**
50 **Medicines.**
51 Radioactive,
52 Anesthetic and hypnotic,
53 Veterinary
53.1 Fowl
53.2 Topical,
54 Inhalants,
55 Internal
56 Laxative,
57 Effervescent,
58 Topical
59 Eye,
60 Dental,
61 Corn,
62 Liniments,
63 Ointments,
64 Suppositories,
86 Medicinal bath,
70 Iodine,
65 Organic
66 Oils and fats,
67 Alkaloids,
68 Metallic compounds
69 Arsenic,
71 Mercury,

167. MEDICINES, POISONS, AND COSMETICS—Continued.

Medicines.
72 Inorganic,
73 Ferments,
74 Animal extracts
75 Pancreas,
76 Thyroid,
77 Suprarenal,
78 Antigens and sera
79 Tuberculosis,
80 Hog cholera,
81 Vitamins,
82 Vehicles
83 Capsules,
84 Medicated papers and fabrics.
85 **Cosmetics and toilet preparations**
87 Hair
87.1 Waving,
88 Dyes,
89 Depilatories,
90 Skin
91 Creams and lotions,
92 Powders,
93 Dentrifices.
94 **Perfumes.**
95 **X-ray contrast compositions.**

168 FARRIERY.

1 **Overshoes**
2 Medicating,
3 Swamp.
4 **Shoes**
5 Ox,
6 Hoof spreading
7 Hinged sections
8 Spring,
9 Stretching bar,
10 Wedge,
11 Auxiliary tread plate,
12 Cushioned
13 Soft tread
14 Sole pad,
15 Spring heels,
16 Interference pads,
17 Fastenings
18 Boots,
19 Clamped sections,
20 Inclined flange,
21 Side spurs,
22 Toe and heel straps,
23 Nails and screws,
24 Shape,
25 Weights.
26 **Sole pads**
27 Medicating,
28 Elastic.
29 **Calks**
30 Creeper section,
31 Removable
32 Bolt,
33 Bolt and lug
34 Clamped,
35 Dovetailed,
36 Hooked lug and pin,
37 Hooked lug and wedge,

168. FARRIERY—Continued.
Calks.
Removable.
38 Nail calk,
Tenoned
39 Button head,
40 Cross pinned,
41 Friction,
42 Screw threaded,
43 Wedged.
44 **Shoeing stands.**
45 **Tools**
46 Calk sharpeners,
47 Hoof and shoe expanders,
48 Hoof cleaners and trimmers,
49 Nail clenchers.

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169 FIRE-EXTINGUISHERS.

1 **Miscellaneous.**
2 **Special applications**
3 For car heaters,
4 For oil tanks.
5 **Fluid systems**
6 Chemical pressure generating
7 Automatic
8 Pressure controlled,
9 Gas-pressure discharge,
10 Gravity,
11 Gas
12 Combustion products,
13 Pump supply,
14 Plural source, mixing in transit
15 Stream impregnating,
16 Distributing systems
17 Dry pipe,
18 Hand controls.
19 **Automatic valves**
20 Pressure controlled
21 Lever system,
22 Differential area.
23 **Alarms.**
Wheeled types
24 Fire engines,
25 Water towers.
26 **Automatic receptacles**
27 Chemical mixing,
28 Explosive,
29 Mechanical discharge.
30 **Portable vessels**
31 Gas pressure
32 Chemical mixing,
33 Piston discharge,
34 Buckets,
35 Tubes,

169. FIRE-EXTINGUISHERS—Con.

Portable vessels
36 Grenades.
37 **Sprinkler heads**
38 Collapsible strut
39 Compound,
40 Lever,
41 Direct support.
42 **Fusible connections.**

170 MOTORS—FLUID CURRENT.

1 **Combined motors.**
2 **Wind motors**
3 Combined types,
4 Receiving chamber
5 Rotary receiver,
6 Endless chain,
7 Oscillatory,
8 Rotary
9 Combined types,
10 Transverse axis
11 Rotary support
12 Guide or deflector attached
13 Multiple wheels,
14 Guide or deflector
15 Axially swiveled,
16 Angular vanes
17 Adjustable
18 Cylindrical gate,
19 Adjustable wheel,
20 Feathering blades
21 Collapsible bucket,
22 Flexible,
23 Parallel axes
24 Positively operated
25 Adjustable,
26 Adjustable,
27 Radial axes
28 Positively operated
29 Adjustable,
30 Adjustable,
31 Adjustable blades or buckets
32 Flexible,
33 Parallel axes,
34 Radial axes,
35 Frame construction,
36 Wheel construction,

170. MOTORS—FLUID CURRENT—Continued.

Wind motors
Rotary
37 Parallel axis
38 Multiple wheels
39 Concentric,
40 Guide or deflector,
41 Wheel-deflection mechanism
42 Vertical deflection,
43 Rearwardly mounted wheel
44 Governor vane,
45 Axially swiveled,
46 Folding wheel and tail vane
47 Brake or stop,
48 Governor vane,
49 Double-folding tail vane,
50 Axially movable wheel,
51 Centrifugal governor,
52 Normally folded,
53 Self-gravitating,
54 Rigidly adjustable,
55 Feathering tail vane,
56 Steering and resistance devices
57 Wind wheel,
58 Adjustable wheel,
59 Adjustable blades
60 Flexible,
61 Axially swiveled,
62 Radially pivoted
63 Groups,
64 Brake or stop,
65 Governor vane
66 Vane on wheel,
67 Centrifugal governor
68 Governor on wheel,
69 Transversely pivoted
70 Single,
71 Sectional.

170. MOTORS—FLUID CURRENT—Continued.

Wind motors
Rotary
Parallel axis
Adjustable blades
Transversely pivoted
72 Brake or stop,
73 Governor vane,
74 Centrifugal governor.
75 Controlling devices,
76 Frame construction
77 Rotary support
78 Yoke,
79 Wheel construction
80 Frames and attachments
81 Vane construction.
82 Water motors
83 Combined types,
84 Endless chain
85 Float
86 Guide or deflector,
87 Multiple unit,
88 Double acting,
89 Guide or deflector,
90 Adjustable motor,
91 Feathering blades
92 Positively operated,
93 Adjustable blades,
94 Oscillatory,
95 Reciprocatory,
96 Crank paddle,
97 Rotary
98 Combined types,
99 Transverse axis
100 Ebb and flow
101 Reversible gates
102 Horizontal
103 Float
104 Guide or deflector,
105 Multiple wheels,

170. MOTORS—FLUID CURRENT—Continued.

Water motors
Rotary
Transverse axis
Horizontal
106 Guide or deflector,
107 Adjustable wheel,
108 Feathering blades
109 Parallel axes,
110 Radial axes,
111 Wheel construction
112 Buoyant wheel,
113 Float
114 Guide or deflector,
115 Multiple wheels,
116 Guide or deflector,
117 Adjustable wheel,
118 Feathering blades,
119 Parallel axes
120 Positively operated,
121 Radial axes
122 Positively operated,
123 Adjustable blades,
124 Wheel construction,
125 Parallel axis
126 Ebb and flow,
127 Float
128 Guide or deflector.
129 Multiple wheels,
130 Guide or deflector,
131 Adjustable wheel,
132 Adjustable blades,
133 Wheel construction
134 Trailing wheel.
135 Impellers
135.5 With motor
135.6 Adjustable impeller.
136 Endless chain
137 Buoyant,
138 Feathering blades
139 Crank paddle
140 Adjustable blades.

170. MOTORS—FLUID CURRENT—Continued.

Impellers
141 Paddle wheel
142 Buoyant,
143 Feathering blades
144 Sliding
145 Adjustable,
146 Parallel axes
147 Positively operated
148 Adjustable,
149 Cam track,
150 Gearing,
151 Eccentric.
152 Radial axes
153 Positively operated
154 Adjustable,
155 Adjustable blades,
156 Screw
157 Buoyant,
158 Sectional,
159 Projected blades
160 Adjustable
161 Flexible
162 Radially pivoted
163 Distance controlled,
164 Transversely pivoted
165 Multiple offset,
166 Inner and outer,
167 Distance attached,
168 Peripheral rim,
169 Braces or stays,
170 Flanged,
171 Looped,
172 Perforated,
173 Attachments,
174 Adjustable blades,
175 Spaced or perforated blades,
176 Rims or flanges,
177 Attachments.

171 ELECTRICITY—GENERATION.

327 Electromechanical nonmagnetic
328 Friction,
329 Electrostatic induction.
95 Galvanometers
308 Expansion.
Inductoriums
123 Transformers, rotary.
Magneto-electric
Armatures
205 Disk,
206 Drum,
207 Pole,
208 Ring,
209 Bipolar,
326 Brush connectors,
324 Brush holders,
325 Brushes,
322 Collector rings,
317 Collector traversing mechanism,
323 Combined brushes and holders,
320 Commutators
321 Radial contact,
118 Connecting devices,
70 Hand machines,
252 Multipolar,
318 Reverse-movement brush shifters,
212 Uniform field.
34 Meters
264 Alternating motor
309 Phase adjustment,
265 Direct motor,
266 Electrolytic,
267 Escapement,
268 Multiple rate,
Thermal
270 Fluid expansion,
271 Hot wire,

171. ELECTRICITY—GENERATION—Continued.

Meters
272 Time,
273 Variable radius.
125 Pyromagneto-electric devices.
Regulators
119 Alternating
241 Compounding,
242 Inductive resistance,
221 Brush adjustment,
222 Circuit interruption,
223 Compound winding,
224 Compounding machines,
225 Counterelectromotive force,
227 Magnetic reluctance,
228 Reducing sparks,
229 Resistance,
230 Sectional winding,
231 Transmitting mechanism.
Systems
312 Automatic regulation,
313 Car,
314 Secondary battery.
97 Systems of distribution
316 Antielectrolysis,
310 Compensating battery
311 Alternating direct,
254 Transformer controllers.

172 ELECTRICITY—MOTIVE POWER.

291 Battery systems.
15 Dental instruments.
152 Elevators.
36 Motors
120 Alternating
233 Condensers,
280 Polyphase,
274 Regulators,
275 Single phase
276 Direct-current type,
277 Distorted field,
278 Shifting field,
279 Starters,
Automatic starters
289 Alternating current,
288 Direct current,
179 Hand operating devices,
290 Linear,
286 Railway type,
126 Reciprocating,
287 Wheel.
8 Steering and propulsion
282 Automatic control,
283 Cable control.
Transmission of power
237 Alternating,
239 Direct
284 Magnetic clutches,
281 Frequency changers,
245 Phase indication,
238 Phase modification,
246 Phase regulation,
240 Reciprocating,
292 Synchronization
293 Rotary element,

173 ELECTRICITY—CONNECTORS

324 Connectors
250 Binding posts,
327 Ceiling blocks,
269 Cord terminals
322 Strain relievers,
273 Line tappers,
326 Pipe couplers,
328 Quick detachable
329 Ceiling blocks,
338 Fixture
341 Magnetic support,
339 Perforated plate attached,
340 Pin-conductor tap,
342 Screw,
Interposed
344 Lamp socket,
343 Two-part plug,
356 Locks and seals,
334 Multiple connections, taps
334.1 Conduit type,
335 Lamp cluster
337 Aligned socket,
336 Switch,
330 Outlet box and wall plug
331 Screw,
361 Plugs,
358 Screw
359 Plugs
360 Expansible,

173. ELECTRICITY—CONNECTORS—Continued.

Connectors
Quick detachable
363 Single contact,
357 Socket adapters,
362 Socket shells,
332 Strain detachable couplers
333 Air pipe,
346 Switch, lamp-socket type
347 Multiple throw
348 Rotatable body,
354 Pull chain,
355 Push,
349 Rotatable body,
350 Rotatable key and contact block
351 Screw base,
352 Rotatable key and facial contact,
262 Rail bonds
280 Socket connected
282 Rivet and wedge,
281 Riveted,
283 Wedge,
Surface connected
277 Bolt or clamp,
278 Soldered,
279 Spring pressed,
244 Machines for covering.

174 ELECTRICITY, CONDUCTORS AND INSULATORS.

1 **Miscellaneous.**
2 **Lightning protection**
3 Rods.
4 **Air terminals.**
5 **Electric shock hazard protective devices.**
6 **Earth grounds**
7 Driving type.
8 **With fluids or vacuum**
9 Current conductive or vaccum,
10 With cable or conduit pre-installation devices,
11 With fluid-condition responsive and/or indicating means,
12 With expansion and contraction means
13 Built into conduit or cable,
14 With fluid maintenance or conditioning means,
15 With cooling and/or fluid feeding, circulating or distributing
16 Ventilation and/or gas circulation,
17 Boxes and housings
18 With bushing, terminal or lead-in,
19 Conduit or cable end structure
20 With fluid stops,
21 Conduit or cable joints
22 With fluid stops,
23 With fluid stops,
24 Conduits, cables and conductors
25 Impregnated insulation type
26 Multiple conductor,
27 Parallel or twisted conductors,
28 Coaxial or concentric type
29 With spiral spacer,
30 Insulators
31 Axial passage and/or through wall or plate.

174. ELECTRICITY, CONDUCTORS AND INSULATORS—Continued.

32 **Anti-inductive structures**
33 Conductor transposition
34 Conduit or cable structure,
35 Shielded or screened
36 Conductor only.
37 **Underground**
38 Distributing and/or combined with overhead,
39 Street, sidewalk, gutter or curb structure.
40 **Overhead**
41 With messenger cable,
42 With conductor vibration damping means,
43 Distributing and/or plural point support,
44 With connector or wire fanning arrangements,
45 Towers, poles or posts.
46 **Handles.**
47 **Combined fluid conduit and electrical conductor.**
48 **Wall mounted conduits and/or housings**
49 Plural outlet and/or conduit.
50 **Boxes and housings**
51 With grounding means,
52 With electric device or mounting means therefor
53 Plug receptacle or wall switch type
54 With fixture coupling or mounting means,
55 Unitary with face plate
56 External,
57 Adjustable,
58 With box or housing mounting means,
59 With connectors

174. ELECTRICITY, CONDUCTORS AND INSULATORS—Continued.

Boxes and housings
With electric device or mounting means therefor
With connectors
60 Cable or conduit terminal casings,
61 Fixture coupling or mounting means
62 Stud or nipple
63 With box supporting means,
64 With conduit or cable coupling means,
65 With conduit or cable openings, coupling means or hole closures.
66 **Covers or face plates**
67 With closure for face plate opening.
68 **Conduits, cables and conductors**
69 Extensible,
70 Combined
71 Branched
72 Multi-duct conduit and/or plural branch,
73 With joint and end structure conductive stressdistributing means,
74 With end structure
75 With joint,
76 Plastic filled,
77 Sealing,
78 With grounding means,
79 With supporting means,
80 With insulator skirts,
81 Elbow or hood outlet type,
82 End cap outlet type,
83 Lining thimble,
84 With joints
85 Axially insulated joint sleeve sections,
86 Angularly movable or adjustable,
87 Angular,

174. ELECTRICITY, CONDUCTORS AND INSULATORS—Continued.

Conduits, cables and conductors
Combined
With joints
88 Plural conductor and/or duct,
89 Radially spread or flanged sheath or conduit,
90 Stranded conductor,
91 Divided joint sleeves
92 Longitudinally,
93 Sleeve and end cap type casing,
94 Bare-conductor,
95 Plural duct
96 Embedded conduit-ducts or conductors,
97 Grooves or channels,
98 With embedded conduit-duct or conductor
99 With interior conductor or cable supports
100 Vertical conductor or cable,
101 Removable wall,
102 Conductive armor or sheath
103 Plural individually sheathed or armored conductors
104 Embedded in shield,
105 Plural, insulated,
106 Plural, conductively contacting, or composite,
107 Protected by non-conductive layer,
108 Spirally applied
109 Overlapping or interlocking,
110 Insulated
111 With beads or discs,
112 With identifying means,
113 Multiple conductor
114 Split conductor,
115 Dissimilar or auxiliary conducting elements,
116 With filler insulation,

Conduits, cables and conductors

Insulated
Multiple conductor
117 Assemblies of non-circular section.
118 With powdered or granular material,
119 Composite or non-circular strand section,
120 Plural or impregnated layers
121 Fibrous or fabric with plastic or coating materials,
122 Fibrous or fabric,
123 Plastic or coating material,
124 Fibrous or fabric,
125 Plastic or coating material,
126 Conductor structure
127 Corona prevention,
128 Plural strand
129 Assemblies of non-circular section,
130 Annular
131 With wall support,
132 Composite,
133 Non-circular strand section,
134 Conductive materials,
135 Accessories
136 Anti-abrasion devices.
137 **Insulators**
138 Special application,
139 Combined
140 With conductive arcing or stress distributing means
141 Strings or stacks,
142 Bushing type
143 Condenser type,
144 Arcing or grading devices,
145 With connector,

Insulators

146 Mid-line spacers
147 Cross-over,
148 Multiple insulator assemblies
149 Multiple conductor,
150 Strings and stacks,
151 Through wall or plate
152 Bushing type
153 Opposed wall engaging means,
154 Insulator and conductor embracing holder
155 Divided insulator,
156 Divided insulator
157 Aligned through aperture
158 With insulator supporting or attaching means
159 Insulated nail or staple type,
160 Strand engaging suspension means,
161 Adjustably or movably mounted,
162 Double arm,
163 Support and/or insulator embracing or clamping,
164 Support penetrating
165 Penetrating element socketed in insulator,
166 Through aperture, penetrating element clamped,
167 With conductor receiving aperture or bushing type,
168 With conductor holding means
169 Fitting or terminal type
170 Hooks,
171 Special conductor form,
172 Insulator embracing
173 Tie wires,
174 Insulator structure
175 Self-retaining,

Insulators

176 With terminal elements
177 Plural
178 Multi-part, sectional, or composite insulator
179 Protected rod type,
180 Pin and opposed overlapping terminal,
181 With insulated reinforcing or interlocking element,
182 Cap and pin,
183 Overlapping
184 Interlinking,
185 Pin and opposed terminal,
186 Caps,
187 Ventilating,
188 Cap type
189 Plastic material adhered,
190 Divided cap,
191 Clamps or clasps,
192 Rings or wedges,
193 Screw or bayonet,
194 Pin type
195 Multi-part insulators,
196 Plastic material adhered,
197 Clamps or clasps,
198 Rings or wedges,
199 Expanded
200 With thimble in socket,
201 Through pin,
202 Screw or bayonet type
203 Strand thread,
204 Sheet material thread,
205 Soft or yielding material pin,
206 Sockets,
207 Link or clevis,
208 Link type,

Insulators

209 Sectional, multi-part, composite, or coated
210 Pin socket type,
211 With moisture or dirt removing or shedding,
212 Surface configuration.

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175 ELECTRICITY—GENERAL APPLICATIONS.

265 **Applications, special.**

41 **Condensers**
41.5 Variable.
853 **Current amplifiers.**
181 **Demagnetizing.**
264 **Discharging static charges.**
315 **Electrolytic devices**
316 Cells
317 Film electrode
318 Asymmetric,
319 Interrupters.
335 **Electromagnet circuits.**
21 **Electromagnets**
367 Lifting or holding.
336 **Electromagnets with armatures.**
338 Alternating current,
345 Armatures,
340 Coil,
337 Compound,
341 Core armature,
339 Polarized,
344 Reciprocating armature,
372 Retarded,
342 Self-adjustable,
343 Suspended element.
Igniting devices
115 Automatic,
296 Cigar,
117 Inductional,
116 Manual,
91 Portable.
312 **Lamp-dimmer systems.**
30 **Lightning arresters**
214 Magnetic,
215 Thermal.
220 **Meter circuit protectors**
221 Plural meters,

175. ELECTRICITY—GENERAL APPLICATIONS—Continued.

Meter circuit protectors
222 With special meter casing or terminal structure,
223 With circuit controller or connector,
224 Combined box and meter exterior thereto,
225 Abutting,
226 Meter circuit and/or terminal enclosures,
182 **Ore detectors.**
351. **Pole changers**
352 Automatic.
363 **Rectifying**
364 Mechanical
365 Vibratory,
366 Solid elements,
320 **Relay circuits.**
356 **Stationary induction apparatus**
362 Coil sections,
361 Incased,
358 Instrument transformers,
359 Open-magnetic-circuit type
360 Incased,
357 With interrupters or condensers.
Switchboards
300 Details,
307 Housed
308 Panel board type
309 Sectional housing,
310 Corner irons,
298 Miscellaneous,
301 Movable contact
302 Pivoted arm,
303 Plunger,
369 Panel-board type
370 Metering,
371 Sectional,

175. ELECTRICITY—GENERAL APPLICATIONS—Continued.

Switchboards
304 Plates,
305 Plates and strips,
306 Strips.
Systems
373 Circuit interruption,
374 Circuit restoring,
375 Electromagnetic switching,
294 Safety,
355 Speed controlled.
183 **Testing**
368 Frequency.
354 **Vapor electric devices.**
376 **Wire-placing apparatus**
378 Fluid pressure
377 Motors,
380 Sectional members,
379 Step by step.

176 ELECTRIC LAMPS.

1 **Miscellaneous.**
Manufacture and repair
2 Exhaustion and gas charging,
3 Apparatus
4 Filaments and glowers,
5 Electrodes,
6 Connections,
7 Processes.
8 **Systems**
9 Combined.
10 Incandescent
11 Pyroelectric,
12 Arc
13 Liquid electrode.
14 **Display.**
15 **Arc and Incandescent.**
16 **Incandescent**
17 Pyroelectric
18 Lamp circuits,
19 Circuit-controlling structure
20 Automatic,
21 Heaters and glowers
22 Relatively movable.
23 Transformer lamps,
24 Automatic switches and cut-outs
25 Electromagnetic,
26 Mutiple-filament lamps
27 Switch,
28 Electrodes in contact,
29 Double base and tubular,
30 Nonrefillable,
31 Locks and seals,
32 Bases, terminals, and bulb holders
33 Switch,
34 Reflectors and refractors,
35 Combined seals and connections,
36 Seals
37 Plug and cap,
38 Connections,

176. ELECTRIC LAMPS—Continued.

Incandescent
39 Auxiliary filament support,
40 Filament form.
41 **Arc**
42 Liquid electrode
43 Temperature regulation,
44 Protectors,
45 Starting
46 Combined,
47 Drawing arc
48 Tilting lamp,
49 Auxiliary electrode,
50 Solid electrode structure and seals.
51 Side-reflector type,
52 Flaming and luminous arc,
53 Alternating current,
54 Automatic auxiliaries,
55 Starting and feeding
56 Concentric feed mounting
57 Inclosed arc,
58 Multiple arc
59 Simultaneous,
60 Gear brake and detent,
61 Arc-shifting switch
62 Gear brake and detent,
63 Magazine,
64 Flaming and luminous arc,
65 Inclined and rotary electrodes
66 Motor,
67 Positive intermittent-grip gear,
68 Special clutch,
69 Gear brake and detent,
70 Consumption feed,
71 Thermal,
72 Motor
73 Electric
74 Motor-circuit control
75 Automatic switch,
76 Positive intermittent-grip gear.

176. ELECTRIC LAMPS—Continued.

Arc
Starting and feeding
77 Positive feed clutch
78 Separate holding clutch,
79 Combined feeding and holding clutch,
80 Combined special clutch and operating means
81 Automatic switch,
82 Ball,
83 Double dog
84 Magnetic clutch,
85 Automatic switch,
86 Pivot dog
87 Automatic switch,
88 Ring
89 Automatic switch,
90 Magnetic clutch and brake
91 Expanding core,
92 Automatic switch,
93 Gear brake
94 Multiple-armature operated,
95 Automatic switch,
96 Gear detent
97 Multiple-armature operated,
98 Automatic switch,
99 Electromagnetic feed
100 Fluid transmission,
101 Automatic switch,
102 Consumption feed
103 Manual,
104 Special starters,
105 Clutches
106 Double dog,
107 Pivot dog,
108 Dampers and dashpots.
109 Stationary electrode,

176. ELECTRIC LAMPS—Continued.

Arc
110 Automatic switches
111 Consumption cut-outs,
112 Thermal switches and cut-outs,
113 Inclosed arc,
114 Magnets, armatures, and magnet supports,
115 Cases and frames
116 Resistances and manual switches,
117 Arc confining, reflecting,
118 Magnetic influence and deflection of arc,
119 Electrode holders
120 Movable contact,
121 Electrode structure.
122 **Gas and vapor**
123 Luminous electrode,
124 Special current supply,
125 Gas and vapor admitting,
126 Electrodes, terminals, and seals.
Filament and glower compositions
127 Carbon containing,
128 Carbon and salt,
129 Carbon and oxid,
130 Carbon and metal,
131 Noncarbon
132 Metals and alloys.
Electrode compositions
133 Carbon containing,
134 Carbon and oxid or salt,
135 Carbon and metal,
136 Noncarbon.

177 ELECTRIC SIGNALING.

311 **Alarms**
314 Burglar,
315 Hose,

311.5 Speed.
333 **Annunciator systems**
334 Answer back,
335 Auxiliary,
336 Elevator,
384 Game,
337 Multiple variation
338 Step by step,
339 Single variation,
340 Station selective
341 Reed,
342 Step by step
343 Strength and polarity,
344 Strength and polarity,

324 **Annunciators**
325 Auxiliary,
326 Grouped units,
327 Multiple variation
328 Step by step,
329 Single variation
330 Circuit closing,
331 Station selectors
332 Step by step.
7 **Bells**
288 Electromechanical.
385 **Submarine**
386 Compressional wave.
352 **Systems**
382 Alarms and extinguishers,
383 Engine-house apparatus,
354 Fire repeaters,

177. ELECTRIC SIGNALING—Contd.

Systems
353 Selective,
360 Signal-box transmission
367 Circuit maintenance,
366 Composite,
379 Detention devices,
368 Door controlled,
372 Frangible element,
369 Local-box actuating-circuit type,
361 Noninterfering
363 Key obstruction,
362 Thermal control,
370 Portable box-actuating key
371 Guards or protectors,
373 Signals at box
374 Lamp,
375 Return or answer back,
376 Simultaneous,
377 Transmitters
378 Make-and-break wheel,
364 Variable signal
365 Dial,
355 Thermal control
356 Composite,
357 Signal-box transmission
359 Fusible motor release,
358 Local - box - actuating - circuit type,
380 Transmitters
381 Rotary distributer.
346 **Systems, display**
348 Drum and cam operated switch,
350 Form-operated switch,
347 Intermittent, thermal switch,
349 Keyboard operated.
351 **Telemetric.**
8 **Whistles.**

178 TELEGRAPHY.

1 **Miscellaneous.**
2 Systems
3 Automatic
4 Printing
4.1 Remote control,
5 Facsimile
5.2 Natural color
5.4 Transmitters or receivers,
5.6 With sound or message
5.8 Transmitters or receivers,
6 Optical
6.5 Stereoscopic,
6.6 With recorder
6.7 Photographic,
6.8 With discharge device having movable scanning ray,
7.1 Transmitters
7.2 With discharge device having movable scanning ray,
7.3 Receivers
7.4 With photographic recorder,
7.5 With discharge device having movable scanning ray,
7.6 Scanning devices
7.7 Discharge devices having movable scanning ray.
8 Multiple pen
10 Type transmitter,
11 Successive line
12 Pendulum synchronized,
13 Cylinder,
14 Revolving stylus,
15 Photographic recorder,
16 Current reversing,
17 Transmitters or recorders
17.5 Storing,

178. TELEGRAPHY—Continued.

Systems
18 Writing
19 Alternating current,
20 Variable direct current,
21 Stenographic,
22 Secret,
23 Printing
24 Bulletin,
25 Page
26 Translators,
27 Selectors,
28 With type-wheel recorder
29 Recorders,
30 Character elements,
31 Multiple-line circuit
32 With type-wheel recorder,
33 Selectors
34 With type-wheel recorder,
35 With type-wheel recorder,
36 Recorders
37 Secret,
38 With type wheel
39 Multiple
40 Shifting devices,
41 Unisons,
42 Paper guiding or feeding,
43 Space induction,
44 Wave transmission
45 Loaded circuit
46 Loading coils,
47 Harmonic or reed
48 Recorders and receivers,
49 Superposed current,
50 Multiplex
51 Resonant,
52 Rotary distributer
53 Synchronizers
53.1 Start stop,

178. TELEGRAPHY—Continued.

Systems
54 Sextuplex,
55 Quadruplex
56 Repeating
57 Duplex diplex,
58 Duplex
59 Differential,
60 Bridge,
61 Diplex,
62 Chemical,
63 Cable or capacity,
64 Coil transformer,
65 Dynamo,
66 Alternating current
67 Modified semicycle,
68 Pulsating current.
69 Line-clearing and circuit maintenance.
69.5 Synchronizers,
69.6 Call.
70 **Repeaters**
71 Automatic
72 Mechanical circuit retainer,
73 Multiple line.
74 **Circuits**
75 Manipulating switch,
76 Retarded closer.
77 **Combined instruments**
78 Portable sets.
79 **Code transmitters**
80 Combined instruments
81 With typewriter,
82 Automatic dot,
83 Rotary contact
84 Drum,
85 Oscillating contact,
86 Reciprocating contact,
87 Stylus and tablet.

178. TELEGRAPHY—Continued.

88 **Receivers**
89 Code recorders
90 Photographic,
91 Siphon,
92 Indenting or perforating,
93 Polarized,
94 Pyrographic,
95 Stop mechanisms,
96 Inking devices,
97 Double-tape movement,
98 Sounders
99 Secret,
100 Augmenting.
101 **Keys**
102 Multiple contact,
103 Multiple line,
104 Self-closing,
105 Reversible,
106 Shifting contact point,
107 Knife-edge pivot,
108 Horizontal swing,
109 Spring pivot,
110 Finger buttons.
111 **Tapes**
112 Perforated.
113 **Codes.**
114 **Instrument tables.**
115 **Learners' instruments.**

179 TELEPHONY.

1 Systems
1.5 Secret,
2 Composite
Superaudible
2.5 Telephone type,
3 Telegraphy
4 Metallic circuit,
5 Fire or police,
5.5 Combined telephone and calling number recorder,
6 Combined telephone and phonograph,
6.3 Check controlled
6.31 Time,
6.4 Check in circuit,
6.5 Check-operated switch,
7 Register
7.1 Time controlled,
8 Central
8.5 Party line,
9 Automatic
10 Central control,
11 Automatic
12 Central control,
13 Central control,
14 Key and lock,
15 Multiplex,
16 Automatic
17 Polystation lines,
18 Percentage,
19 Lockout
20 Central energy,
21 Combined rotary and nonrotary
22 Nonrotary,
23 Central energy,
24 Combined rotary and nonrotary,
25 Nonrotary,

179. TELEPHONY—Continued.
Systems
Automatic
26 Auxiliary automatic exchange,
27 Semiautomatic,
27.5 Selective switches
27.51 Rotary single level,
27.52 Multidirectional,
27.53 Panel type,
27.54 Cross bar.
28 Polystation lines
29 Portable sets,
30 Lockout
31 Centralized energy
32 Central,
33 Central,
34 Centralized energy
35 Central,
36 Central,
37 House or intercommunicating
38 Lockout
39 Central energy,
40 Centralized energy,
41 Divided central
42 Private branch exchange,
43 Reciprocal signaling trunks,
44 Automatic ringing,
45 Through ringing
46 Centralized energy,
47 Multiple switchboard,
48 Multiple switchboard
49 Centralized energy,
50 Centralized energy,
51 Central
52 Multiple answering jack,
53 Multiple switchboard
54 Auxiliary,
55 Centralized energy
56 Line-signal control
57 Spring-jack cut-off,
58 Relay cut-off,

179. TELEPHONY—Continued.
Systems
Central
Multiple switchboard
59 Plug-terminal
60 Line-signal control
61 Spring-jack cut-off,
62 Special test plug,
63 Special test plug
64 Line-signal control
65 Spring-jack cut-off,
66 Relay cut-off,
67 Line-signal control
68 Spring-jack cut-off.
69 Relay cut-off,
70 Centralized energy
71 Line-signal control
72 Spring-jack cut-off,
73 Relay cut-off.
74 Line-signal control
75 Spring-jack cut-off,
76 Relay cut-off,
77 Centralized energy,
78 Anti-inductive
79 Condenser,
80 Impedance,
81 Substation circuits,
82 Space induction,
84 Call
85 Step by step,
86 Strength and polarity,
87 Reed,
88 Automatic,
89 Return,
90 Transmitters.
91 Switchboards
92 Drop restorers,
93 Plug shifters,
94 Lamp annunciators,
95 Plug seats, switches, and take-ups,
96 Spring-jack

179. TELEPHONY—Continued.
Switchboards
Spring-jack
97 Strips,
98 Wire distribution,
99 Substation.
100 Sets.
100.1 Telegraphophones
100.11 Combined radio and phonograph
100.12 Mechanical connection,
100.2 Magnetic,
100.3 Photographic
100.31 Slot units,
100.4 Composition
100.41 Recorders and reproducers.
101 Telephones
102 Combined receiver and transmitter
103 Hand,
104 Micromagnetic,
105 Compound,
106 Condenser,
107 Audiphones,
108 Intensifiers
109 Harmonic vibrators,
110 Molecular,
111 Electrostatic,
112 Induction coil,
113 Nondiaphragm,
114 Magnetic
115 Diaphragm
115.5 Movable actuating coil,
116 Multiple,
117 Magnets
118 Combined telephone and call,
119 Pole pieces,
120 Tubular.
121 Transmitters
122 Granular
123 Multiple diaphragm,
124 Electrode
125 Embedded,
126 Plunger,

179. TELEPHONY—Continued.
Transmitters
Granular
Electrode
127 Pockets,
128 Projections,
129 Rotary,
130 Granules magnetic,
131 Multiple electrode
132 Multiple diaphragm,
133 Fluid
134 Jet,
135 Differential,
136 Multiple series contact,
137 Multiple contact,
138 Diaphragm
139 Multiple,
140 Electrode
141 Contact
142 Gravity
143 Hinged or pivoted,
144 Magnetic,
145 Spring.
146 Supports
147 Stands,
148 Vertical adjustment,
149 Pivoted arm
150 Extension,
151 Slidable holders,
152 Transmitter,
153 Holder, transmitter supported,
154 Suspension
155 Reels,
156 Headgear,
157 Body,
158 Switches
159 Hook
160 Selective line,
161 Obstruction
162 Movable jaw,
163 Horizontal slide,

179. TELEPHONY—Continued.
Switches
Hook
164 Gravity lever
165 Vertical slide
166 Connectors
167 Receiver
168 Mobile
169 Rotary contact
170 **Repeaters**
171 **Relays**
171.5 Modulators
172 **Induction coils**
173 Multiple
174 **Anti-induction devices**
175 **Testing devices**
175.1 Manual
175.11 Routine
175.2 Automatic or semiautomatic
175.21 Selectors and connectors
175.23 Directing switches
175.24 Call indicators
175.25 Wiring
175.3 Long lines
175.31 Repeaters
176 **Listening and ringing keys**
177 Polystation lines
178 **Details**
179 Casing
180 Dampers
181 Diaphragms
182 Earpieces
183 Hoods
184 Protectors
185 Antiseptic
186 Connections
187 Mouthpieces
188 Voice screens
189 Locks
190 Resistance elements

180 MOTOR VEHICLES

1 **Miscellaneous**
2 **Motor supplied from external source**
3 **Sleds**
4 Stepper
5 Traction belt
6 Traction wheel
7 **Special driving device**
8 Stepper
9 Portable track
9.1 Endless, flexible
9.2 Steering by driving
10 Annular
11 **Motor-carrying attachments**
12 Driven-steering-wheel type
13 Single wheel
14 **Vehicle trains**
14.5 Overload release
15 **Additional traction wheel**
16 **Traction-wheel attachments**
17 **Steering by driving**
18 **Compensating by steering**
19 **Steered by walking attendant**
20 **With rollers**
21 **Special wheel base**
22 Five or more wheels
23 Driven-steering-wheel type
24 Stub-axle type
25 Three wheeled
26 Driven-steering-wheel type
27 Two parallel wheels driven
28 Steam traction engines
29 Two wheeled
30 Tandem
31 Driven-steering-wheel type
32 Spring frame
33 Power
34 Electric
35 Frame receptacle
36 **Steam traction engines**
37 Driven-steering-wheel type
38 Four wheels driven
39 With boiler leveler
40 Spring mounted on axle
41 **With leveling device**
42 **Driven-steering-wheel type**
43 Stub-axle type
44 Four wheels driven
45 Four steering wheels
46 Pivot in wheel plane
47 Pivot in wheel plane
48 Pivot in wheel plane
49 Four wheels driven
50 Four steering wheels
51 Motor swinging with axle
52 Motor swinging with axle
53 **Motor as source of external power**
54 **Power**
55 On lower running gear
56 Rear axle and body
57 Longitudinal shaft
58 Frame
59 Pivoted support on axle
60 Electric
61 Pivoted support on axle
62 Rear axle
63 Motor moved by axle
64 Motor mounting on body frame
65 Electric
66 Fluid pressure
67 Steam
68 Radiators and condensers, mounting
68.5 Battery mountings and holders
69 Hoods
69.01 Water deflectors
69.1 Underpans
70 **Transmission mechanism**
71 Final drive, axle movable
72 Chain
73 Shaft
74 Tire directly driven
75 Rear axle
76 **Compensating devices**
77 **Controlling devices**
78 Steering shaft
79 **Steering gear**
Power
79.1 Electric
79.2 Fluid
79.3 Mechanical
79.4 Swinging axle
79.5 Truck
82 **Safety devices**
82.1 Speed responsive
83 Fender and buffer actuated
84 **Dust guards**
85 **Running gear**
88 Rear axles
89 **Bodies**
90 Dashboards
Floor
90.6 Footboards and pedal guards

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181 ACOUSTICS

0.5 **Miscellaneous**
26 **Sound-locating devices**
29 **Mechanical telephones**
Speaking tubes
18 Systems
19 Alarms and indicators
20 Combined mouth and ear pieces
21 Mouthpieces
22 Tubes
24 **Stethoscopes**
25 **Ear trumpets**
23 **Auricles**
27 **Megaphones**
28 **Dentiphones**
30 **Auditorium**
31 **Diaphragms and mountings**
32 **Diaphragms**
33 **Mufflers and sound filters**
34 Mouthpieces
35 Fluid conducting or guiding
36 Combined
37 With safety valve
38 With cut-out
39 Underwater exhaust
40 Manifold
41 Through passage
42 With sound absorbing material
43 With fluid mingling
44 With by-pass
45 Valve controlled
46 Multi-passage
47 Expansion chamber
48 Side branch chamber
49 Baffle type
50 With sound absorbing material

Mufflers and sound filters
Fluid conducting or guiding
Baffle type
51 With fluid mingling
52 Liquid
53 Retroverted
54 With side branch chamber
55 Coaxial foraminous walls
56 Multi-passage
57 Expansion chamber
58 Centrifugal flow
59 Side branch chamber
60 Multiple outlet
61 Casings
62 Insulated
63 Baffle structure
64 Moving
65 Biased
66 Spiral
67 Helical
68 Perpendicular and oblique
69 Perpendicular
70 Oblique
71 Filling material
72 Accessories

182 SEWERAGE

1 **Miscellaneous**
2 **Catch basins**
3 Liquid-seal outlet
4 Automatic valve
5 Automatic outlet valve
6 Street-curb inlet
Traps
7 Liquid seal
8 Refrigerator type
9 Grease trap
10 Hopper
11 Air port
12 Refiller
13 Mercury seal
14 Automatic valve
15 Inlet
16 Outlet
17 Hand valve
18 Plural connection
19 Projecting inlet and outlet
20 Projecting inlet
21 Projecting outlet
22 Flushing pipe
23 Internal strainer
24 Closures
Valve seal
25 Vertical pipe
26 Horizontal pipe
27 **Air valves**
28 **Flushers**
30 **Animal stops**
31 **Grated inlets**

183 GAS SEPARATION

1 **Miscellaneous**
2 **Separating gases from gases**
2.5 **Deaerating liquids**
2.7 **Oil or gas well traps**
3 **With liquid separation**
4 **Solid absorbent type**
4.1 Automatic control
4.2 Fluid current or gravity flow type
4.3 Plural operations
4.4 Combined
4.5 With regeneration
4.6 Movable
4.7 Plural fixed units
4.8 Separate unitary elements
5 **Gas treatment**
6 **Combustion**
7 **Electrical**
8 **Liquid treatment**
9 With filtration
10 Subsequent
11 Heat exchanging
12 Unitary structure
13 Fluid distribution
14 Superposed filter
15 Superposed filter
16 Fluid distribution
17 Preliminary
18 Heat exchanging
19 Unitary structure
20 Fluid distribution
21 With deflection
22 Subsequent
23 Heat exchanging
24 Unitary structure
25 Fluid distribution
26 Liquid circuit

Liquid treatment
With deflection
Subsequent
27 Fluid distribution
28 Preliminary
29 Heat exchanging
30 Unitary structure
31 Fluid distribution
32 **Thermal**
33 **Fluid distribution**
34 Systems
35 Impelling
36 Inlet
37 Gas outlet
38 Residue outlet
39 Valved
40 Inlet
41 Gas outlet
42 Residue outlet
43 Conducting
44 **Filtration**
45 Loose material
46 Renewing
47 Compressing
48 Flow control
49 Supporting
50 Trays
51 Reticulated screen
52 Cleaning
53 With cut-off
54 Shaking
55 Jarring
56 Brushing
57 Pneumatic
58 Shaking
59 Jarring

Filtration
Reticulated screen
Cleaning
60 Brushing
61 Pneumatic
62 Movable
63 Rotatable
64 Vaned
65 Flow control
66 Inlet and residue
67 Inlet
68 Residue
69 Layered
70 Multiple
71 Zigzag
72 Conical
73 Cylindrical
74 Transverse
75 **Deflection**
76 Deflector cleaning
77 Rotatable deflector
78 Wind vane
79 Curved passage
80 Vortical whirl
81 Vertical
82 Tangential inlet
83 Upflow outlet
84 Supplemental chamber
85 Residue-flow control
86 Adjustable deflector
87 Vaned deflector
88 Curved deflector
89 Conical deflector
90 Horizontal inlet
91 Upflow inlet
92 Downflow inlet

Deflection
93 Upflow inlet
94 Upflow outlet
95 Residue-flow control
96 Perforated deflector
97 Reticulated
98 Grid
99 Oblique deflector
100 Tubular deflector
101 Adjustable deflector
102 Spiral deflector
103 Conical deflector
104 Ribbed
105 Downflow inlet
106 Upflow outlet
107 Downflow outlet
108 Horizontal inlet
109 Upflow outlet
110 Horizontal outlet
111 Residue-flow control
112 Perforated deflector
113 Ribbed deflector
114 **Processes**
114.2 Using solid absorbent
114.5 Separating gases or vapors from mineral oils
114.6 Separating mineral oil vapors from gases
115 Separating gases from gases
119 Thermal
120 With liquid treatment
121 Liquid treatment
122 Filtration or deflection

1 **Miscellaneous**
1.5 **Automobile crank and gear case service**
2 **Mine-car lubrication**
3 **Track or wheel lubrication**
4 **Windmill lubrication**
5 **Slide-bearing lubrication**
6 **Systems**
7 Conveying devices
8 Continuous tube
9 Sliding tube
10 Wipers
11 Splash
12 **Conveyors**
13 **Splash**
14 **Lubricators**
15 Belt, cable, or chain lubricators
16 Swab applied
17 Roller applied
18 Clyinder lubricators
19 Swab applied
20 Rotary swab applied
21 Elevator-guide lubricators
22 Swab
23 Rotary brush or roller
24 Piston-rod lubricators
25 Swab
Force feed
26 Pumps
27 Mechanically operated
28 Hand operated
29 Fluid operated
30 Pendulum operated
31 Rotary
32 Oscillating piston

Lubricators
Force feed
Pumps
33 Rotary piston and valve
34 Oscillating distributing valve
35 Rotary distributing valve
36 Attachments
Followers
37 Mechanically operated
38 Hand operated
39 Fluid operated
40 Fluid return
41 Spring assisted
42 Spring return
43 Centrifugal
44 Pendulum operated
45 Spring operated
46 Weight operated
47 Balance piston
48 Locking devices
Fluid operated
49 Condensation displacement
50 Double passage
51 Single passage
52 Choke plugs
53 Auxilliary feeding receptacles
54 Displacement
55 Steam or air
56 Injectors
57 Initial pressure
58 Suction
59 Vented
60 Abrasion
61 Conveyors
62 Bucket
63 Rotary

Lubricators
Force Feed
64 Capillary attraction
65 Gravity feed
66 Automatic cut-off
67 Electrically operated
68 Thermostats
69 Vibrators
70 Centrifugal
Rotatable valve
71 Mechanically operated
72 Fluid-pressure operated
73 Pendulum operated
Vertically-reciprocating valve
74 Mechanically operated
75 Spring retained
76 Fluid-pressure operated
77 Centrifugally operated
78 Pendulum operated
79 Horizontally-reciprocating valve
80 Combined closure and valve
81 Multiple feed
82 Vertically-movable valve
83 Measuring valve
84 Air-tight receptacle
85 Siphons
86 Locking valve
87 Fiber valve
88 Oil-cup closures
89 Depressible cap
90 Hinged cover
91 Spring controlled
92 Rotatable cover
93 Spring controlled
94 Slidable cover
95 Spring controlled

Lubricators
96 Sight feeds
97 Attachments
98 Liquefiers
99 Solid stick
100 Slide-bearing lubricators
101 Roller
102 Swab
103 Constant level
104 Heating and cooling devices
105 Refilling devices
106 Drip pans

185 MOTORS

1 **Miscellaneous**
2 **Composite**
3 Horsepower type
4 Weight
5 Escapement controlled
6 Winding
7 Motor
9 Spring
10 Winding
11 Motor
12 Momentum type
13 Overwinding preventers
14 Indicator
15 **Horsepower type**
16 Belt tread
17 Drum
18 Disk
19 Sweep
20 Driving and whipping devices
21 Sweeps
22 Equalizers
23 Draft devices
24 Driving and whipping devices
25 Anchors
26 **Pivoted seat**
27 **Weight**
28 Operator
29 Oscillating
30 Wave type
31 Escapement controlled
32 Winding
33 Motor
35 Overwinding preventers
36 Indicator
37 **Spring**
38 Escapement controlled
Spring
39 Winding
40 Motor
41 Momentum type
43 Overwinding preventers
44 Indicator
45 Spring mounting
46 **Escapements**

186 STORE SERVICE.

1 **Dining-room service.**
2 **Gravity systems**
3 Selective delivery,
4 Tilting track
5 Both ends movable
6 Pivoted arms.
7 **Self propelled-car systems.**
8 **Single-impulse systems**
9 Speed increasing,
10 Spring
11 Longitudinally moving line,
12 Gravity,
13 Spreaders.
14 **Cable-propulsion systems**
15 Grip, selective release,
16 Load release,
17 Reciprocating
18 Drop car.
19 **Switches**
20 Selective
21 Carrier returned.
22 **Elevators and drops**
23 Speed-controlled drop.
24 **Buffers**
25 Slide.
26 **Carriers**
27 Wheeled
28 Self-propelled,
29 Drop receptacle,
30 Derailment guards,
31 Rolling,
32 Sliding.
33 **Details**
34 Track.

187 ELEVATORS.

1 **Miscellaneous.**
2 **Building material.**
3 **Dumb-waiter type**
4 Mail,
5 Locked car.
6 **Exterior wall**
7 Lateral movement,
8 Car brake.
9 **Portable**
10 Inclined,
11 Winding drum.
12 **Inclined**
13 Cable-controlled brakes
14 Rail gripping.
15 **Shiftable weight.**
16 **Superposed cars.**
17 **Motor mechanism**
18 Lazy tongs,
19 Rack and pinion,
20 Rope drive
21 Hand-rope operated,
22 Tensioning feature,
23 Differential sheave,
24 Screw
25 Traveling rotary element,
26 Traveling sheave,
27 Winding drum.
28 **Control mechanism**
29 Electric,
30 Door actuated
31 Electric,
32 Landing stops
33 Lock,
34 Limit
35 Electric,
36 Carrier actuated
37 Deflected rope,

187. ELEVATORS—Continued.

Control mechanism
38 Speed controlled
39 Electric,
40 Well obstruction
41 Electric,
42 Operator actuated
43 Electric,
44 Rope controllers
45 Running rope,
46 Controller locks
47 Door actuated
48 Electric,
49 Locked door
50 Electric,
51 **Door mechanism**
52 Motor actuated
53 Common motor shaft,
54 Separate motors,
55 Flexible screens,
56 Sliding doors
57 Locked door,
58 Vertical movement
59 Locked door,
60 Sliding coupler,
61 Locks.
62 **Hatch mechanism**
63 Lever opener,
64 Sliding coupler,
65 Direct contact,
66 Vertically slidable hatch.
67 **Well-end cushions.**
68 **Fluid governors**
69 Car-supported pump,
70 Counterweight.
71 **Emergency cables.**
72 **Cable releasers.**
73 **Car brakes and catches**
74 Door controlled,

187. ELEVATORS—Continued.

Car brakes and catches
75 Landing chairs
76 Car supported,
77 Driven catch devices
78 Rotating gear,
79 Well supported,
80 Car supported
81 Cable controlled
82 Positive
83 Rail side,
84 Sliding,
85 Rail face,
86 Rail side
87 Eccentric,
88 Wedge,
89 Speed controlled
90 Rail side
91 Vertically pivoted,
92 Operator controlled
93 Rail side.
94 **Counterbalances.**
95 **Guides**
96 Mine crossheads.
97 **Railway-car locks.**
98 **Well-obstruction devices.**

1 **Miscellaneous.**
2 **Vehicle**
3 Train,
4 Wheel and ground,
5 Ground engaging
6 Sprag,
7 Anchors,
8 Sled,
9 Wagon
10 Four wheel,
11 Divided beam,
12 Running-gear support
13 Divided beam,
14 Hayrack type,
15 Retreating shoe,
16 Independent wheel,
17 Hub or disk
18 Motor vehicle,
19 Cart,
20 Children's carriages,
21 Truck
22 Two wheel
23 Ground engaging.
24 Velocipede
25 Roller,
26 Hub or disk,
27 Pivoted wheel,
28 Clasp,
29 Top shoes,
30 One way,
31 Positive lock,
32 On ground,
33 Railway
34 Train,
35 Wheel and rail
36 Chock
37 Roller shoe,

188. BRAKES—Continued.
Vehicle
Railway
38 Track
39 Rotary shoe,
40 Slot,
41 Rail
42 Carrier type,
43 Grippers,
44 Automatic,
45 Wheel clamps,
46 Equalizing series,
47 Connected trucks,
48 Maximum-traction type.
49 Four-wheel opposing
50 Open center,
51 Divided beam,
52 Four-wheel spreading
53 Divided beam
54 Locomotive type,
55 Mine-car type,
56 Clasp,
57 Top shoes,
58 Disk on axle
59 Side shoes,
60 Positive lock,
61 One way,
62 On track
63 Catchers.
64 **Wheel and strand.**
65.1 **Strand**
65.2 With attaching means,
65.3 Plural brakes,
65.4 Tortuous grip
65.5 Adjustable.
67 **Rod.**
Wheel
68 Frictional and positive,
69 Positive lock,
70 Axially and transversely movable,

188. BRAKES—Continued.
Wheel
71 Axially movable
72 Opposing
73 Rim grip,
74 Transversely movable
75 Opposing
76 Rim grip,
77 Strap,
78 Expanding
79 Multiple sets,
79.5 Wear take-up or compensating,
80 Rotary shoes,
81 One way
81.1 Brake staff stops,
82 Hoisting type,
83 Continuous,
84 Fixed brake,
85 Intermittent.
Internal resistance
86 Fluid and mechanical,
87 Fluid
88 Shock-absorber type
89 Rotary,
90 Rotary
91 Reciprocating piston,
92 Gear-pump type,
93 Oscillating,
94 Rectilinear
95 Vacuum,
96 Cataract
97 By-pass,
98 Communicating chambers,
99 Continuous motion,
100 Details and regulators,
101 Granular material,
102 Spring,
103 Inertia,
104 Magnetic.

188. BRAKES—Continued.
Operators
105 Multiple
106 Vehicle
107 Railway,
108 Vehicle step,
109 Seat,
110 Automatic
Vehicle
111 Trips,
112 Train,
113 Four wheel,
114 Hub,
Auxiliary mechanism on tongue
115 Rear wheel
116 Divided beam,
117 Front wheel
118 Divided beam,
Movable tongue
119 Rising and falling,
120 Rear wheel
121 Divided beam,
122 Front wheel
123 Divided beam,
Railway
124 Train
125 Drawbar
126 Speed responsive,
127 Strain release,
128 Sled,
129 Rise and fall
130 Rotary,
131 Turning,
132 Horse pull,
134 Differential movement,
135 Momentum
136 Wedging shoe,
137 Electric control
138 Vehicle,

188. BRAKES—Continued.

Operators
Automatic
Momentum
139 Gravity control,
140 Vehicle
141 Fluid-pressure control,
142 Draft control,
143 Wheel and ground,
144 Railway
145 Winding
146 Axle,
147 Train
148 Push rod,
149 Drawbar
150 Speed responsive,
151 Fluid pressure
152 Road vehicle,
153 Rail vehicle,
154 Exhaust of propelling motor,
155 Fluid current,
156 Electric and mechanical
157 Electric motor on staff,
158 Electric
159 Dynamic
160 Additional current,
161 Electromagnet
162 Rotary motor,
163 Solenoid,
164 Magnetic circuit
165 Rail engaging,
166 Spring
167 Vehicle
168 Draft release
169 Wagon,
170 Fluid-pressure release,
171 Electric release
172 Dependent motor and brake circuits,
173 Vehicle,

188. BRAKES —Continued.

Operators
174 Weight
175 Draft control,
176 Vehicle body
177 Inclined,
178 Longitudinally movable,
179 Float,
Speed responsive
180 Regulators
181 Vehicle,
182 Fluid and electric control,
183 Internal resistance,
184 Transversely expanding
185 Radial,
186 Transversely contracting,
187 Axially moving,
188 Strand engaging,
189 Stops.

Position adjusters
190 Vehicle-body movement
191 Radius rod,
192 Turning
193 Railway,
194 Pivoted wheel,
195 Load,
196 Slack
197 Railway car,
198 Automatic
199 Friction clutch,
200 Ratchet bar,
201 Shims,
202 Screw
203 Fluid operated,
204 Equalizers,
205 Supports
206 Brake element
207 Beam
208 Road vehicle,
209 Brackets,

188. BRAKES —Continued.

Position adjusters
Supports
Brake element
Beam
210 Safety,
211 Locks,
212 Parallel motion
213 Multiple-point support,
214 Wear compensation
215 Brake shoes,
216 Release mechanism,
217 Brake-thrust distributers.

Elements
218 Brake wheels,
219 Beams
220 Wagon type
221 Automatically adjustable heads and shoes,
222 Trussed,
223 Fixed heads
224 Structural beam,
225 Composite beam
226 Trussed
227 Tubular compression member,
228 Structural compression member,
229 Adjustable,
230 Automatically adjustable heads,
231 Fulcrums
232 Reversible,
233 Spaced,
234 Shoe fasteners
235 Locomotive type,
236 Heads,
237 Combined wheel guards,
238 Multiple shoes,
239 Superposed,
240 Linear arrangement

188. BRAKES—Continued.

Elements
Shoe fasteners
Multiple shoes
Linear arrangement
241 Frangible connection,
242 Interlocking heads and shoes
243 Longitudinal key,
244 Longitudinal insertion,
245 Side insertion,
246 Clamps,
247 Shoe-back lugs
248 Cast in,
249 Flexible shoes,
250 Shoes
251 Composite
252 Flanged
253 Recessed,
254 Shells,
255 Cast-metal matrix
256 Nonmetallic inserts,
257 Faces,
258 Backs,
259 Flexible,
260 Chills,
261 Recessed
262 Rotary,
263 Wheel guards,
264 Cooling and lubricating,
265 Locks.

189 METALLIC BUILDING STRUCTURES.

1 **Buildings**
1.5 Aircraft type,
3 Bins,
4 Greenhouses,
5 Jails
6 Rotary,
Doors
7 Bolt work
8 With indicators,
9 Gratings
10 Connections,
2 Portable.
11 **Portable towers.**
12 **Skeleton towers**
13 Arrangement
17 Tanks,
18 Windmills,
16 Derricks,
14 Elevating,
15 Tilting,
19 Structure,
Details
20 Brace adjustments,
21 Caps and bases.
21.1 **Monuments, markers, and guards**
21.2 Monuments,
21.3 Markers.
22 **Electric-wire supports.**
23 **Poles and posts**
24 Compound,
25 Multiple supports,
26 Sectional,
27 Insulated parts,
28 Bases
29 Anchored
30 Auger,
30.5 Key locked,

189. METALLIC BUILDING STRUCTURES—Continued.

Poles and posts
Bases
Anchored
31 Expanding,
31.1 Braced
31.2 Compound,
31.3 Truss,
31.4 Strut,
31.5 Tie,
32 Protectors,
33 Cross arms.
90 **Land anchors**
91 Augers,
92 Expanding.
80 **Fire shields**
81 Collapsible.
43 **Stairs**
44 Spiral.
46 **Doors**
52 Theater curtains,
Thermal control
47 Horizontally sliding,
48 Vertically sliding,
49 Horizontally swinging,
50 Vertically swinging,
51 Sectional,
53 Panels.
64 **Windows**
65 Weather proofing,
66 Double movement
67 Sliding pivot,
68 Swinging frame,
69 Swinging sash
70 Laterally sliding weather strips
71 Thermal control,
72 Vertically sliding sash
73 Movable or removable guards,
74 Thermal control,

189. METALLIC BUILDING STRUCTURES—Continued.

Windows
75 Frames,
76 Sash
77 Pane supports and fastenings
78 Removable,
79 Guards.
54 **Shutters**
55 Awnings,
56 Roll
57 Operating devices,
58 Thermal control,
61 Registering slide,
59 Horizontally sliding,
60 Vertically sliding,
Slats
62 Pivoted,
63 Fixed.
45 **Thermally-controlled devices**
Grilles
82 Composite,
83 Integral,
84 Securing devices.
37 **Girders.**
38 **Columns**
39 Compound,
40 Wood and metal,
41 Shapes,
42 Caps and bases.
85 **Metal sheathing**
86 Overlapping ends
87 Cornice,
88 Securing devices
89 Cornice.
34 **Structural units**
35 Clips or fasteners,
36 Joints and connections.

190 BAGGAGE.

1 **Convertible**
2 Bed,
3 Bureau
4 Top and front opening
5 Compartment top,
6 Front opening
7 Compartment front,
8 Chair,
9 Shelved
10 Desk flap,
11 Desk or table
12 Camp kits,
13 Wardrobe
14 Extensible
15 Telescopic.
16 **Sample cases**
17 Link-supported tray.
19 **Trunks**
20 Circular end,
21 Extensible and sectional
22 Telescopic,
23 Wall,
24 Frames and interior braces,
25 Reenforcing strips,
26 Protecting harness,
27 Harness,
28 Valances,
29 Tray movers and supporters
30 Lid operated, movement,
31 Pivoted tray
32 Vertical pivot,
33 Sliding tray,
34 Link connections and props,
35 Trays,
36 Followers,
37 Corner shields and buffers,
38 Supporting devices.
39 Handles,

190. BAGGAGE—Continued.

Trunks
40 Materials.
41 **Traveling bags**
42 Combined,
43 Frameless and folding,
44 Extensible
45 Telescopic
46 Auxiliary opening,
47 Rack fastener,
48 Top opening,
49 Frames
50 Stays,
51 Compartments and partitions
52 Exterior and auxiliary,
53 Materials and patterns,
54 Frame and bag leather joints,
55 Bag-fastening handles,
56 Lock-plate handle fastenings,
57 Handles
58 Fasteners,
59 Strap-loop fasteners,
60 Article attachers,
61 Safety attachers.

191 ELECTRICITY—TRANSMISSION TO VEHICLES.

1 **Miscellaneous.**
2 **Systems of distribution**
3 Convertible, multiple current source
4 Internal and external,
5 Alternating direct,
6 Sectional,
7 Alternating-alternating,
8 Safety cut-out.
9 **Drawbridge and transfer table.**
10 **Magnetic induction.**
11 **Vehicle in series.**
12 **Flexible extensions**
12.2 Reels
12.4 With connector plug or receptacle.
13 **Plate conductor.**
14 **Sectional conductor**
15 Normally live section,
Normally dead section
16 Magnetomechanical circuit controller,
17 Magnetic circuit controller
18 Magnet on vehicle
19 Traveling controller,
20 Mechanical circuit controller
21 Deformable conductor.
22 **Conductors**
23 Conduit
24 Asymmetric,
25 Closing,
26 Draining,
27 Heated,
28 Special modifications,
29 Third rail
30 Protected
31 Closing,
32 Supports,
33 Trolley
34 Nonunderrunning,
35 Guarded,

191. ELECTRICITY—TRANSMISSION TO VEHICLES—Continued.

Conductors
Trolley
36 Special intersections,
37 Crossings,
38 Switches,
39 Section insulators,
40 Supports
41 Catenary,
42 Combined ears and insulators,
43 Ears
44 Splices,
44.1 Splicers.
45 **Collectors**
46 Convertible,
47 Bar,
48 Conduit plow,
49 Third-rail shoe,
50 Trolley
51 Common wire passing,
52 Detachable,
53 Nonunderrunning,
54 Indefinite path
55 Bow,
56 Roller,
57 Multiple contact
58 Tandem,
59 Heads
59.1 Sliding contact,
60 Swivel
60.1 Center bias,
60.2 Lateral swing,
60.3 Vertical swing,
60.4 Axial slide,
60.5 Pole-couplings,
61 Wheel to head contactor,
62 Ice clearers or preventers,
63 Wheels
63.1 Quick release,
63.2 Lateral slide,

191. ELECTRICITY—TRANSMISSION TO VEHICLES—Continued.

Collectors
Trolley
Heads
Wheels
63.3 Universal mount,
63.4 Slidable pins,
63.5 Pin-fasteners,
64 Poles
65 Frame,
66 Stands
67 Fluid-pressure erector,
68 Spring erector
69 Torsion,
70 Tension or compression,
71 Rope protectors,
72 Guards and finders
73 Constantly operative
74 Fixed,
75 Spiral-cam replacer,
76 Star wheel,
77 Normally operative
78 Automatic,
79 Rope retracted
80 Lateral swing,
81 Longitudinal swing,
82 Normally inoperative
83 Automatic,
84 Rope actuated,
85 Trolley retrievers
86 Erector release
87 Fluid-pressure erector,
88 Spring erector
89 Toggle,
90 Fluid-pressure retracted,
91 Spring retracted
92 Rope actuated
93 Slack take-up.
94 Weight retracted,
95 Nonretracting trolley stops.

192 CLUTCHES AND POWER-STOP CONTROL.

.01 **Motor control and clutch**
.02 Electric motor.
1 **Motor control and brake**
2 Electric motor,
3 Fluid motor.
3.2 **Fluid impact coupling and clutch.**
3.5 **Transmission and clutch control**
3.6 Planetary.
4 **Transmission control and brake**
5 Back-pedaling brake
6 Hub brake,
7 Automatic brake
8 Drive release,
9 Electric control,
10 Belt shipper,
11 Belt tightener.
12 **Clutch and brake**
13 Vehicle type,
14 Same member,
15 Automatic check and release
16 Clutch and brake same member,
17 Peripheral brake,
18 Sliding operation,
19 Crank control.
20 **Clutch and gear**
21 Reversing.
22 **Latch operated**
23 Corn-planter type.
24 Longitudinally moving transmission member
25 Pin,
26 Transversely moving transmission member
27 Ball or roller,
28 Positive
29 Rotating key.
30 **Clutches**
30.5 Impact delivery type,

192. CLUTCHES AND POWER-STOP CONTROL—Continued.

Clutches

31 Automatic
32 Manual control
33 Definite-position release,
34 Shaft thrust,
35 Pilot mechanism
36 Brake band,
37 Transversely moving.
38 Ball or roller,
39 Positive,
40 Electric,
41 One-way engaging
42 Free-engine type,
43 Reversible
43.1 Pivoted pawls,
43.2 Slidable pawls,
44 Ball or roller,
45 Ball or roller,
45.1 Wedging pawl or block,
45.2 Two-point gripper,
46 Positive,
47 Manual control,
48 Multiple
49 Parallel vehicle wheels
50 Free wheel,
51 Reversing,
52 Progressive engagement
53 Frictional and positive,
54 Torque responsive
55 Yielding,
56 Release on overload,
57 Fluent material and mechanical,
58 Fluent material
59 Axially movable piston,
60 Transversely movable piston,
61 Gear-pump type,
62 Plow-lifting type,
63 Free-engine type,

192. CLUTCHES AND POWER-STOP CONTROL—Continued.

Clutches

64 Velocipede free wheel,
65 Axially and transversely engaging,
66 Axially engaging
67 Positive,
68 Opposed,
69 Multiple disk,
70 Spreading,
Transversely engaged
71 Positive,
72 Interior and exterior
73 Opposing,
74 Interior
75 Expanding
76 Radial,
77 Split ring
78 Cam operated,
79 Exterior
80 Strap
81 Multiple folds,
82 Operators
83 Multiple,
84 Electric,
85 Fluid pressure
86 Double acting,
87 Multiple clutches,
88 Flexible motor,
89 Spring or weight
90 Electric release,
91 Fluid release,
92 One-direction apply and release,
93 Cam,
94 Screw,
95 Handwheel,
96 Central pin
97 Screw operated,
98 Shipper saddles,

192. CLUTCHES AND POWER-STOP CONTROL—Continued.

Clutches

Operators
99 Lever systems,
100 Follow up,
101 Releasing.
102 Check of driven member,
103 Speed responsive
104 Fixed-speed release,
105 Fixed-speed engagement,
106 Release.

Elements

107 Engaging
108 Positive,
109 Thrust members, retarders, and stops,
110 Shafts, bearings, and adjusting devices,
111 Wear compensators,
112 Casings,
113 Lubricating and cooling,
114 Locks,
115 Supports.
116.5 **Stop mechanism**
117 Phonograph type
118 Nonset,
119 Limit-of-movement control,
120 Combined operation,
121 Brake operation
122 Normally applied
123 Electric release.
124 Start and stop,
125 Material control,
126 Sheet material
127 Electrical,
128 Pneumatic,

192. CLUTCHES AND POWER-STOP CONTROL—Continued.

Stop mechanism

129 Safety device
130 Hand protector
131 Two hand,
132 Delayed action drive,
133 Automatic guard
134 Punch-press type,
135 Cover
136 Centrifugal-machine type,
137 Disabled transmission,
138 Limit stop
139 Rotary-member control
140 Speed responsive,
141 Screw,
142 Electrical,
143 Reciprocating-member control,
144 Drive release and brake
145 Multiple clutch,
146 Change speed,
147 Speed responsive,
148 Positive stop
149 Cushioned,
150 Overload release.

193 CONVEYERS—CHUTES, SKIDS, GUIDES, AND WAYS.

1 **Miscellaneous.**

2 **Chutes**

3 Loading or trimming,
4 Unloading
5 Vehicle-wall supported,
6 Extensible trough,
7 Fruit,
8 Mail,
9 Grain drill,
10 For rotary drum,
11 With sprayer,
12 Spiral
13 Switch,
14 Sectional, multiple-point discharge,
15 Vertically adjustable, bodily,
16 Horizontal and vertical swing,
17 Vertical swing
18 Counterweight
19 Varied,
20 Valved.
21 Valved,

Horizontal swing

22 Swiveled sections,
23 Multiple-point discharge,
24 Counterweight,
25 Flexible wall,
27 Zigzag
28 Switch,

Vertical pipe

29 Multiple-point discharge,
30 Telescopic,
31 Switch,
32 Retarder,

193. CONVEYERS—CHUTES, SKIDS, GUIDES, AND WAYS—Contd.

Chutes

33 Wall
34 Vertical.
35 **Rollerways**
36 Switch,
37 Rollers.
38 **Skidways**
39 Switch,
40 Retarder.
41 **Skids**
42 **Roller jacks**
43 **Orienter.**

194 CHECK-CONTROLLED APPARATUS.

1 **Miscellaneous.**
4 **Anomalous check**
5 Fluid delivery.
6 **Check in circuit**
7 Article delivery,
8 Signal.
9 **Check-operated switch**
10 Article delivery,
11 Electric meters,
12 Exhibitors,
13 Fluid delivery,
14 Induction coils,
15 Phonographs,
16 Signal.
17 **Lock releasing**
18 Gravity
19 Forwardly turning released part
20 Measuring instruments
21 Scales,
22 Article delivery
23 Chance,
24 Endless carrier
25 Magazine,
26 Rotary feed.
27 Sliding pusher,
28 Exhibitors,
29 Fluid delivery,
30 Game apparatus,
31 Phonographs,
32 Reciprocating released part
33 Measuring instruments
34 Pull testers,
35 Scales,
36 Strike testers,
37 Article delivery
38 Endless carrier,
39 Sliding pusher,

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194. CHECK-CONTROLLED APPARATUS—Continued.

Lock releasing
Gravity
Reciprocating released part
40 Article-securing stands,
41 Chance and game apparatus,
42 Exhibitors,
43 Fluid delivery,
44 Telephones,
45 Reset turning released part
46 Measuring instruments
47 Scales,
48 Article delivery,
49 Article-securing stands,
50 Chance and game apparatus,
51 Door and lid locks,
52 Exhibitors,
53 Fluid delivery,
Thrust
54 Pivoted detent
55 Reciprocating coin mover
56 Measuring instruments,
57 Article delivery
58 Sliding pusher,
59 Door and lid locks,
60 Fluid delivery,
61 Turning coin mover
62 Measuring instruments,
63 Article delivery,
64 Article-securing stands,
65 Door and lid locks,
66 Fluid delivery,
71 Article delivery,
67 Reciprocating detent
68 Article delivery,
69 Reciprocating coin mover,
70 Turning coin mover.

194. CHECK-CONTROLLED APPARATUS—Continued.

72 **Connectors**
73 Gravity,
Check
74 Reciprocating and turning parts
75 Article delivery,
76 Chance and game apparatus,
77 Fluid delivery,
78 Reciprocating parts
79 Article delivery
80 Sliding pusher,
81 Chance and game apparatus,
82 Fluid delivery,
83 Turning parts
84 Concentric
85 Article delivery,
86 Chance and game apparatus.
87 Fluid delivery,
88 Article delivery,
89 Chance and game apparatus.
90 Fluid delivery,
91 Article delivery.
92 **Lock preventing**
93 Article delivery.
94 **Check-rotated wheel.**
95 **Shutter.**
96 **Check-engaged alarm.**
97 **Fraud preventives**
98 Check exhibitors,
99 Combined size and material testers,
100 Material testers
101 Magnets,
102 Size testers,
103 Weight testers.
2 **Miscellaneous, article delivery.**
3 **Miscellaneous, fluid delivery.**

195 CHEMISTRY, FERMENTATION.

1 **Ultimate processes or products**
2 Fermentative liberation or purification of materials
3 Oils, fats, waxes, esters, or lipins,
4 Proteins and carbohydrates,
5 Silk, keratins, or proteins
6 Depilation or bating or treatments of animal tissues,
7 Carbohydrates
8 Celluloses
9 With non-fermentative chemical treatment
10 Subsequent chemical treatment only,
11 Sugars,
12 Fermentation with chemical modification of final fermentates,
13 Different sequential fermentative operations
14 Including diastatic mashing
15 Including ethyl alcoholic fermentation by yeasts
16 Mashing by non-fungal agents, fermentation by yeasts only,
17 Diastatic mashing
18 By malt or non-fungal agents only
19 By malt with separate preformation of malt,
20 Mashing of carbohydrate adjuncts by malt
21 With preformation of carbohydrate adjuncts
22 Separate diastatic conversion stages,
23 Mashing by preseparated malt extracts or disatase,

195. CHEMISTRY, FERMENTATION—Continued.

Ultimate processes or products
Diastatic mashing
By malt or non-fungal agents only
Mashing of carbohydrate adjuncts by malt
24 Separate diastatic conversion stages,
25 Mashing by preseparated malt extracts or diastase,
26 Mashing of malt only,
27 Initial fermentands of undetermined compositions,
28 Initial fermentands of different chemical types,
29 Proteins or amines, fermentation of,
30 Carboxylic acids, and acid esters, fermentation of,
31 Carbohydrates, fermentation of
32 Fermentation to non-carbohydrates
Celluloses, fermentation of,
33 By living organisms with extraneous ferments,
34 By molds only
35 Carboxylic acids productions,
36 By yeasts only
37 Glycerol-yield augmentation,
38 Cellulose-liberation waste liquors,
39 With preformation of fermentands
40 Including pre-saccharification,
41

195. CHEMISTRY, FERMENTATION—Continued.

Ultimate processes or products

Carbohydrates, fermentation of

Fermentation to non-carbohydrates

42 By bacteria only

43 Polyhydric or higher alcoholic production

44 Butyl alcohol and acetone production

45 With preformation of ferments therefor

46 Acclimatization or immunization of ferments,

47 Carboxylic acids production

48 Lactic acid production,

49 Alcohols, fermentation of,

50 Nitrogen-fixation or transformation by fermentation,

51 Oxidative or reductive fermentation.

Ferment-containing products or making or preserving same

52 Products

53 Living-fungi containing

54 Packages or structures,

55 Including extraneous non-living-fungus ferments,

56 Including extraneous non-ferment materials

57 Yeasts type only

58 Minimal or low moisture,

59 Bacteria type only,

60 Yeasts only,

61 Malt-containing,

195. CHEMISTRY, FERMENTATION—Continued.

Ferment-containing products or making or preserving same

Products

62 Prefreed-enzymes-containing,

63 Including extraneous non-ferment materials

64 Diastase-containing,

65 Processes

66 Prefreed-enzyme-containing

67 Including living matters or enzyme-containing cells,

68 Including extraneous non-ferment materials,

69 Malt-containing, fungi-free

70 Germination of seeds with following operations,

71 Germination of seeds,

72 Living-fungi-containing, maltfree

73 Including extraneous non-ferment materials

74 Yeasts type only,

75 Bacteria type only,

76 Cell-modification propagation with other treatment of fungi,

77 Propagation with other treatment of fungi

78 Including cell-modification treatment of fungi,

79 Acclimatization or cell-modification propagation,

80 Propagation

81 Molds type only,

82 Yeasts type only

83 With preformation of propagation media

84 Pre-treatment of cellulose-waste liquors,

195. CHEMISTRY, FERMENTATION—Continued.

Ferment-containing products or making or preserving same

Processes

Living-fungi-containing, maltfree

Propagation

Yeasts type only

With preformation of propagation media

85 Pre-treatment of molasses or saccharifferous saps

86 Including pre-mashing or pre-fermentation

87 Mashing by malt or non-fungal agents only,

88 Pre-mashing or fermentation

89 By malt or non-fungal agents only,

90 With presence of non-yeast living organisms or extraneous enzymes,

91 In cellulose waste-liquors or proteins and molasses or saccharifferous saps,

92 In protein-free media, except molasses and saccharifferous sap,

93 Multi-stage,

94 Continuous or concomitant addition of nutrients,

95 Special air-oxygen or gas supplying or pressure regulation,

195. CHEMISTRY, FERMENTATION—Continued.

Ferment-containing products or making or preserving same

Processes

Living-fungi-containing, malt free

Propagation

96 Bacteria type only,

97 Non-devitalization cell-modification treatment of yeasts,

98 Non-devitalization treatment of yeasts.

Materials or making same

99 Products

100 For propagation or treatment of organisms,

101 Processes

102 For propagation or treatment of organisms,

103 Fermentand containing.

104 **Processes**

105 Fermentations with fermentate removal and use or treatment of residues

106 Uses of the residues in fermentations,

107 Fermentations with recoveries from or treatments of foams or gases,

108 Fermentations

109 Air-oxygen or gas supply, or pressure regulation,

110 In presence of unfavorable ferments or regulation of ferment concentration,

111 By plural organisms or ferments

112 By acclimatized or cell-modified organisms,

195. CHEMISTRY, FERMENTATION—Continued.

Processes

Fermentations

113 By living ferments in presence of nutrient matters,

114 In presence of liquid or dissolved activators or accelerators.

115 Continuous,

116 Uses of solid catalysts or absorbents or dispersing fermentands or ferments,

117 Regulation of compositions of fermentand containing media or concentrations

118 Hydrogen-ion concentrations regulation,

119 Physical removal of unfavorable matters,

120 Inoculations,

121 Elimination or reduction of contamination by undesired ferments

122 By non-living matters only

123 By antiseptics,

124 By hydrogen-ion concentrations regulations only,

125 By temperature regulations only,

126 Reduction of contamination, oxidation or air contact.

127 **Apparatus**

128 Germinating, or moistening and gasating solids and treating the products.

195. CHEMISTRY, FERMENTATION—Continued.

Apparatus

129 Germinating, or moistening and gasating of solids

130 Including presteeping, presoaking or pretreating,

131 Invertible rotary-drum containers,

132 Propagating or fermenting with pretreating materials and treating the products,

133 Propagating or fermenting and treatment of products

134 Separating yeasts, ferments, foams or solids from liquids

135 Including strainers, crates, racks or centrifugal separators,

136 Including treating evolved gases

137 Fermenter-trains or gas-inlets or contacting means,

138 Propagating or fermenting with pretreatment of materials,

139 Propagating or fermenting

140 Multiple

141 In series (for fermentand flow),

142 Including gas-inlets or gas-contacting means,

143 Including submergers, agitators, circulators or dispersers,

144 Including gas-offtakes or closed fermenters,

146 Preserving, treating or containing yeasts or living ferments.

196 MINERAL OILS.

1 **Miscellaneous processes.**

2 **Miscellaneous apparatus.**

3 **Dehydrating oil**

4 With chemical, absorbent, or filtering material,

5 Heating or distilling,

6 With centrifuging.

7 **Mineral oils from hydrocarbon gases**

8 Distillation from absorbents,

9 Heating gas and mineral oil,

10 Polymerizing of gas,

11 Weathering or rectification of wild gasoline,

12 Blending.

13 **Extracting with solvents or liquids**

14 From sand, shale, or rock.

15 **Purifying used oil**

16 Lubricating oil.

17 **Paraffin**

18 With chilling,

19 With separation of paraffin from oil,

20 Separation of residual oil from paraffin,

21 Chemical treatment.

22 **Asphalt treatment.**

23 **Refining with chemicals**

24 Removing sulfur

25 Distillation with chemicals

26 With metals, salts, or oxids of metals,

27 Treatment of vapors with chemicals

28 With metals, salts, or oxids of metals,

29 Oxidizing agents,

30 Salts or nonalkaline oxids of metals,

196. MINERAL OILS—Continued.

Refining with chemicals

Removing sulfur

31 Acid,

32 Alkaline material

33 Plumbate,

34 Thinning with solvents,

35 Distillation with chemicals,

36 Treatment of vapors with chemicals,

37 Liquid sulfur dioxid,

38 Combined acid and alkaline treatment,

39 Acid

40 Sulfuric acid,

41 Alkaline material,

42 Oxidizing agents,

43 Reducing agents,

44 Salts or nonalkaline oxids of metals.

45 Contacting processes,

46 Apparatus.

Distillation

Vaporizing processes

47 With cracking

48 Returning condensate to vaporizer,

49 In stages,

50 Special material treated,

51 Digestion,

52 With catalysts

53 Hydrogenation,

54 Metallic halides,

55 With solids or absorbent material

56 Solid bituminous material,

57 Electrical treatment,

58 Tube and drum type

59 Cyclic circulation,

60 Combined liquid and vapor phase,

196. MINERAL OILS—Continued.

Distillation

Vaporizing processes
With cracking
61 Vapor phase,
62 With gas, vapor, or volatile liquid
63 Steam
64 Water,
65 Air or oxidizing gas,
66 Hydrocarbons,
67 Combustion gas,
68 Stirring or agitating,
69 Removing carbon,
70 Liquid baths,
71 Without cracking
72 Returning condensate to vaporizer,
73 In stages,
74 Making or refining asphalt,
75 Special material treated
76 Tar,
77 Vacuum,
78 With catalysts,
79 With solids or absorbent material
80 Solid bituminous material,
81 Electric treatment,
82 Tube and drum type
83 Cyclic circulation,
84 With gas, vapor, or volatile liquid
85 Steam
86 Water,
87 Air or oxidizing gas,
88 Hydrocarbons,
89 Combustion gases,
90 Stirring or agitating,
91 Removing carbon,
92 Liquid baths,

196. MINERAL OILS—Continued.

Distillation

93 Vapor treatment processes
94 Fractional condensing,
95 Pressure variation,
96 Filtering,
97 Mixing with vapor or gas,
98 Combined vaporizing and condensing apparatus
99 Condensate returned to vaporizer
100 Columns,
102 Condenser or collector in vaporizer,
103 Heads,
104 Vaporizing apparatus
105 Systems
106 Series stills,
107 Tube and drum
108 Cyclic circulation
109 Drum above tube,
110 Tubular,
111 With partitions,
112 Rotary,
114 Vacuum,
115 Special shapes,
116 Furnaces and flues
117 Internal flues,
118 Liquid baths,
119 Jackets,
120 Special means for heating
121 Electric,
122 Carbon removers,
123 Circulators or agitators
124 Mechanical,
125 Baffles,
126 Fluid injectors,
127 Fluid injectors,
128 Films or sprays,
129 Depending legs or spur tubes,

196. MINERAL OILS—Continued.

Distillation

Vaporizing apparatus
130 Bottoms
131 Unheated,
132 Automatic control,
133 Special features of construction,
134 Heat recovery from vapor or residuum,
135 Feeders,
136 Vapor outlets,
137 Attachments,
138 Condensing apparatus
139 Dephlegmators or fractionating columns,
140 Contact with cooling fluid,
141 Automatically controlled temperature.
142 Oxidation.
143 Increasing specific gravity.
144 Treatment with light rays.
145 Removing emulsifying agents.
146 Washing.
147 Treatment with filtering material.
148 Sludge treatment.
149 Compositions and products
150 Fuel,
151 Lubricating oil,
152 Asphalt or pitch.

197 TYPEWRITING MACHINES.

1 **Miscellaneous.**
5 **Double.**
2 **Book**
3 Work supports.
4 **Cryptographic.**
7 **Logotype.**
8 **Music.**
9 **Stenographic.**
6 **Embossing or penetrating**
6.1 Point-printers for the blind,
6.2 Movable font carrier
6.3 Electrical,
6.4 Rotary
6.5 Keyboard
6.6 Separately striking character,
6.7 Separately striking character.
10 **Annular printer.**
11 **Permutation.**
Power driven
12 Electric
13 Bar
14 Selectors,
15 Pneumatic,
16 Mechanical
17 Bar,
18 Rotating wheel.
19 **Machine operators**
20 Perforated tape.
21 **Bar**
23 Hammer,
Inking
24 Traveling pivot,
25 Thrust,
22 Front strike,
26 Top strike,
27 Actions
28 Accelerating,

197. TYPEWRITING MACHINES—Con.

Bar
Actions
29 Disconnecting,
30 Toggle,
31 Bar locks,
32 Links,
33 Returning springs,
34 Starters,
35 Bars
36 Heads
37 Pivoted,
38 Bearings
39 Roller,
40 Dust guards,
41 Hanger supports,
42 Rests,
43 Type guides.
44 **Index wheel**
45 Platen striking,
46 Striking letter,
47 Wheel striking.
48 **Key wheel**
49 Hammer,
52 Spherical,
50 Helical shift,
51 Platen striking,
53 Striking letter
54 Flexible plate,
55 Wheel striking.
56 **Plate**
57 Flexible,
58 Rectilinear,
59 Rotary.
60 **Carriages**
61 Rocker platen,
62 Driving springs,
63 Margin regulators,
64 Retarders,

197. TYPEWRITING MACHINES—Con.

Carriages
65 Returns
66 Electrical,
67 Pneumatic,
68 Spring,
69 Roller bearings,
70 Stops.
71 **Case shifts**
72 Double shift,
Platen
73 Vertical shift,
Type bar
74 Hanger support,
75 Pivoted head,
76 Rotatable head,
77 Selectors,
78 Key attachments,
79 Platen lock.
80 Key lever,
81 Stops.
82 **Feed mechanism**
83 Silent key,
84 Variable spacing,
90 Screw feed,
Escapement
85 Parallel pawls,
86 Single pawl,
Transverse
87 Pawls,
88 Limber pawl,
89 Force feed,
91 Back spacers,
92 Releases
93 Clutch,
94 Pawl,
95 Pinion,
96 Rack,
97 **Universal bars.**

197. TYPEWRITING MACHINES—Con.

98 **Keyboards**
99 Permutation,
100 Key arrangement
101 Hand guides,
102 Key caps and stems
103 Cushion caps,
104 Rotatable caps,
105 Screens.
106 **Key levers.**
107 **Key locks.**
108 **Line locks**
109 Escapement,
110 Key lever,
111 Type bar,
112 Universal bar.
113 **Liners.**
114 **Line spacing**
115 Combined space and release,
116 Condensed billing
117 Lever operated,
118 Traveling stop,
119 Indicating scales,
120 Automatic,
121 Irregular
122 Detent release,
123 Ratchet release,
124 Flat platen,
125 Platen wear distributers.
126 **Manifolding.**
127 **Paper feeding**
128 Condensed billing,
129 Divided platen,
130 Sheet magazine,
131 Sheet, carbon roll,
132 Tally strip,
133 Web
134 Carbon roll,
135 Card holders
136 Platen carried,

197. TYPEWRITING MACHINES—Con.

Paper feeding

137 Feed bands,
138 Feed rolls,
139 Fingers,
140 Edge gages,
141 Page end locks,
142 Side-edge gages,
143 Tables.
144 **Platens**
145 Detachable,
146 Endwise adjustable
147 Noiseless,
148 Flat,
149 Printing-plane adjusters.
151 **Ribbon mechanism**
152 Book,
153 Duplicating,
154 Visible
155 Case-shift equalizing,
156 Multiple ribbon,
157 Varied path
158 Automatic,
159 Vertically reciprocating vibrator,
160 Automatic reverse
161 Bulk,
162 Direct pull,
163 Double feed,
164 Gear operated,
165 Ribbon projection,
166 Double feed
167 Automatic,
168 Endless ribbon,
169 Disconnecting,
170 Guides,
171 Ribbon inkers,
172 Ribbons,
173 Signals
174 Action locks,

197. TYPEWRITING MACHINES—Con.

Ribbon mechanism

175 Spools.
150 **Inking devices.**
176 **Tabulators**
177 Column selecting,
178 Denominational,.
179 Stop setting.
180 **Attachments**
181 Erasing devices,
182 Reflectors.
183 **Buffers.**
184 **Cleaners**
185 Automatic.
186 **Frames.**
187 **Indicators**
188 Letter space,
189 Page end,
190 Printing point,
191 Tabulating,
192 Bells,
193 **Machine locks.**
194 **Scales.**

198 CONVEYERS—POWER-DRIVEN.

1 **Miscellaneous.**
2 **Box-car-loader type**
3 Longitudinally adjustable,
4 Centrally supported,
5 Single-end supported,
6 Blower or thrower.
7 **Loading-machine type**
Endless conveyer with coacting gatherer
8 Endless gatherer,
9 Rotary gatherer,
10 Reciprocating gatherer,
11 Endless conveyer
12 Bucket,
13 Tine,
14 Reciprocating conveyer.
15 **Locomotive-stoker type.**
16 **Escalator type**
17 Endless lateral bend and step-forming conveyer.
18 Endless horizontal and step-forming section.
19 **Work-station type.**
20 **Article transfer**
21 Article controlled,
22 Circular articles,
23 Endless pusher -bar and article registering,
24 Reciprocating pusher,
25 Rotary member,
26 Intermediate chute and regulator.
27 Vertically swinging member,
28 Coacting stationary member.
29 **Arranging articles on conveyers**
30 In row or rows,
31 Single to multiple rows,
32 Multiple to single row,

198. CONVEYERS—POWER-DRIVEN—Continued.

Arranging articles on conveyers

33 Orienting articles,
34 Spacing,
35 Piling or unpiling.
36 **Piling or unpiling bulk material.**
37 **Material-controlled drive.**
38 **Carrier-controlled selective delivery.**
39 **Weighing and measuring.**
40 **Signaling, indicating, etc.**
41 **Magnetic.**
42 **Distributing type.**
43 **Conveyer and chute type**
44 Hoppers between conveyers,
45 Chutes between conveyers,
46 Feeding and discharging
47 Receiving and discharge hoppers,
48 Hopper and discharging chute
49 Adjustable discharging chute,
50 Receiving and discharging chute
51 Adjustable chute,
52 Conveyer feeder
53 Hopper
54 Fixed conveyer under storage bin,
55 For vertical-bucket type conveyer,
56 For horizontal conveyer
57 Hopper-bottom endless conveyer
58 Separate conveyer,
59 Reciprocating feeder
60 Horizontal load support,
61 Vertically vibrating chute,
62 Rotary regulating means,
63 Endless or rotary guiding chute,
64 Screw feeder,

198. CONVEYERS—POWER-DRIVEN—Continued.

Conveyer and chute type
65 Conveyer discharge
66 Plural-discharge conveyer
67 Chute at each end of conveyer,
68 Plural-discharge chute,
69 Hopper
70 Leg supported,
71 Rotatable conveyer leg,
72 Adjustable chute
73 Vertically swinging,
74 Horizontally swinging.
75 Plural
76 Variable and differential speeds,
77 Traveling bridge and elevator,
78 Main and tributary
79 Collecting
80 Wing feeders,
81 Distributing,
82 Single line
83 Plural discharge,
84 Superposed,
85 Closed path,
86 Automatic oscillating,
87 Foldable,
88 Adjustable
89 Longitudinally slidable,
90 Horizontally swinging delivering to dependent vertically swinging,
91 Vertically swinging delivering to vertically swinging,
92 Series carriers,
93 Adjustable delivering to stationary
94 Vertically swinging,
95 Horizontally swinging,
96 Bodily adjustable,

198. CONVEYERS—POWER-DRIVEN—Continued.

Plural
Single line
Adjustable
97 Stationary delivering to adjustable
98 Receiving hopper type,
99 Vertically swinging,
100 Horizontally swinging,
101 Bodily adjustable,
102 Both endless,
103 Endless and rotary,
104 Endless or rotary and screw,
105 Endless or rotary and live rolls,
106 Endless and reciprocating,
107 Rotary and reciprocating.
108 Single
109 Flexible frame,
110 Variable velocity and reversible,
111 Automatic shifting
112 Oscillating,
113 Folding
114 Swinging
115 Vertically, pivoted,
116 Suspended loop,
117 Adjustable
118 Bodily and swinging,
119 Swinging
120 Bodily,
121 Vertically
122 Pivoted at receiving end,
123 Pivoted at discharge end,
124 Horizontally
125 Pivoted at receiving end,
126 Bodily,
Conveying-element structure
127 Live rolls,
128 Thrower,

198. CONVEYERS—POWER-DRIVEN—Continued.

Single
Conveying-element structure
129 Endless
130 Single cable,
131 Special-article engaging
132 Hod-elevator type,
133 Signatures,
134 Sheet on edge,
135 Step by step,
136 Spiral,
137 With guides
138 Off-bearing,
139 Extensible,
140 Bucket
141 Discharging
142 Hollow-head drum,
143 Bucket door,
144 Ejector,
145 Pivoted bucket
146 Withdrawable trip,
147 Inclined-track trip,
148 Pivoted
149 Gap closing,
150 Strand attachment,
151 Strand attachment,
152 Bucket structure,
153 Flexible pocket,
154 Shelf
155 Tilting discharge,
156 Interfingering
157 Pivoted,
158 Pivoted,
159 Superposed runs, all runs active,
160 Coacting member
161 Oppositely moving,
162 Endless
163 Shelf type,

198. CONVEYERS—POWER-DRIVEN—Continued.

Single
Conveying-element structure
Endless
Coacting member
Endless
164 Push plate,
165 Belt,
166 Reciprocating,
167 Rotary,
168 Pusher
169 Plural discharge,
170 Pivoted,
171 Lateral plate,
172 Vertical plate
173 Upward,
174 Downward,
175 Strand attachment
176 Single,
177 Hook,
178 Article impaling,
179 Gripper
180 For sheets,
181 Uniplaner,
182 Superposed runs, lateral bend,
183 Traveling roll,
184 Belt
185 Unloader
186 Tripper,
187 Twister,
188 Scraper,
189 Carrying-chain,
190 Multiple strand,
191 Troughing
192 Roll.
193 Structure
194 Chain and fabric,
195 Slatted
196 Troughed,

198. CONVEYERS—POWER-DRIVEN—Continued.

Single
Conveying-element structure
Endless
Belt
Structure
Slatted
197 Friction increaser,
198 Projecting member
199 Slat,
200 Single strand (log dogs),
201 Troughed belt,
202 With aligning guides,
203 Driving devices,
204 Trough structure
205 Gate,
206 Leg structure
207 Boot,
208 Tighteners,
209 Rotary
210 Gripper,
211 Horizontal axis,
212 Pusher,
213 Screw
214 Variable capacity,
215 Internal thread,
216 Reversible blades and adjustable pitch,
217 Opposed-direction feed,
218 Reciprocating
219 Interfingered sections,
220 Vibrating trough,
221 Pusher bar
222 Platform loader and unloader,
223 Tine,
224 Blade,
225 Coacting catch,
226 Plunger.

198. CONVEYERS—POWER-DRIVEN—Continued.

227 Antibackslider.
228 Discharge hoods.
229 Cleaners
230 Belt,
231 Leg.
232 Automatic stops,
233 Special vehicle mounts and auxiliary supports.

199 TYPE CASTING.

1 Integral line
2 Nonreleasing matrix machines
3 Wire guide
4 Matrix-manipulating mechanisms,
5 Rotary matrix carrier,
6 Slidable matrix carrier
7 Matrix-manipulating mechanisms,
8 Multiple-character-bar machines
9 Assembling, casting, and distributing,
10 Assembling and distributing,
11 Assembling, casting, and distributing
12 Non-screw-feed distributer machines,
13 Assembling and casting,
14 Assembling and distributing
15 Multiple-magazine machines
16 Movable magazine,
17 Collector mechanism,
18 Assembling
19 Multiple-magazine machines
20 Movable magazine,
21 Collector mechanism,
22 Space-band mechanisms,
23 Escapement and collector mechanisms,
24 Multiple-channel automatic-shift mechanisms,
25 Power operating mechanisms,
26 Collector and transfer mechanisms,
27 Collector mechanisms
28 Chute springs,

199. TYPE CASTING—Continued.

Integral line
Assembling
Collector mechanisms
29 Matrix receivers
30 Slide attachments,
31 Shifting mechanisms,
32 Transfer mechanisms,
33 Distributing
34 Special matrix,
35 Non-screw-feed distributer,
36 Transfer mechanisms,
37 Matrix carriers,
38 Odd-font-detecting mechanisms,
39 To multiple magazines
40 Font sorting
41 Matrix separator,
42 Matrix separator,
43 Automatic stops,
44 Magazines
45 Movable multiple magazine,
46 Removing attachments,
47 Casting mechanisms
48 Multiple mold,
49 Matrix holders,
50 Vises,
51 Justifying mechanisms,
52 Automatic stops
53 Squirt preventers,
54 Molds and cutters,
55 Molds
56 Cooling devices,
57 Modified liner,
58 Liners,
59 Cutters,
60 Ejectors,
61 Deliveries,
62 Cleaning attachments,

199. TYPE CASTING—Continued.

Integral line
Casting mechanisms
63 Matrices
64 Distributer features,
65 Multiple character,
66 Special-design face,
67 Space bands
68 Wedge.
69 **Separate type**
70 Surplus-type-supply machines,
71 Individually movable-matrix machines
72 Releasing matrix,
73 Rotary-matrix-carrier machines,
74 Pattern control,
75 Slidable-matrix-carrier machines
76 Two-way movement
77 Pattern control,
78 Keyboard control,
79 Matrix cases,
80 Casting mechanisms
81 With finishing mechanisms
82 Mold-side-ejector mold,
83 Two-part mold,
84 Mold-side-ejector mold
85 Low quad,
86 Moving mold,
87 Two-part mold
88 Moving mold,
89 Moving mold,
90 Squirt preventers,
91 Molds
92 Mold-side ejector
93 Low quad,
94 Two part,
95 Deliveries,
96 Matrices.

200 ELECTRICITY—CIRCUIT MAKERS AND BREAKERS.

1 **Multiple-circuit control**
2 Loop,
3 Combined thermal current,
4 Combined pivoted and reciprocating contact,
5 Multiple switch,
6 Pivoted contact
7 Combined types,
8 Radial contact pressure
9 Plural switch,
10 Arc extinguishing and preventing,
11 Dial type
12 Electromagnetic release
13 Plural switch,
14 Plural switch,
15 Knife blade,
16 Reciprocating contact,
17 Operating means
18 Plural switch.
19 **Periodic**
20 Combined
21 Rotary and cam
22 Adjustable,
23 Multiple contact
24 Rotary
25 Adjustable,
26 Radial contact pressure,
27 Cam operated,
28 Rotary
29 Adjustable,
30 Cam operated
31 Adjustable,
32 Liquid contact.
33 **Retarded**
34 Dashpot,

200. ELECTRICITY—CIRCUIT MAKERS AND BREAKERS—Contd.

Retarded
35 Clock train
36 Rotary
37 Multiple contact,
38 Cam operated,
39 Latch trip
40 Motor release,
41 Weight release,
42 **Unauthorized-use preventing**
43 Permutation switch,
44 Lock
45 Permutation.
46 **Pattern-sheet controlled.**
47 **Limit switch.**
48 **High-potential type.**
49 **Pole switch.**
50 **Interlocking.**
51 **Combined plug.**
52 **Special application**
53 Valve,
54 Door or sash,
55 Lock,
56 Indicating instrument,
57 Letter box,
58 Tire,
59 Lever or wheel shaft,
60 Portable light,
61 Incubator
Snap
62 Auxiliary snap contact,
63 Rotating contact
64 Push or pull,
65 Detent
66 Radially movable,
Oscillating contact
67 Double snap
68 Cam or wedge release
69 Two button,

200. ELECTRICITY—CIRCUIT MAKERS AND BREAKERS—Contd.

Snap
Oscillating contact
Double snap
70 Latch trip
71 Two button,
72 Two button,
73 Single snap
74 Latch trip,
75 Two button,
76 Reciprocating contact
77 Cam or wedge release,
78 Latch trip.
79 **Suspended-wire controlled.**
80 **Centrifugal.**
81 **Fluid pressure**
82 Piston,
83 Diaphragm.
84 **Float.**
85 **Weight**
86 Treads.
87 **Electromagnetic**
88 Combined thermal current,
89 Nonclosable,
90 Periodic,
91 Alternating current,
92 Motor,
93 Polarized,
94 Predetermined current,
95 Magnetic-pull adjustment
96 Automatic,
97 Retarded,
98 Multiple magnet
99 Aligned
100 Core armature,
101 Core armature,
102 Multiple coil,
103 Multiple armature,
104 Multiple contact,

1 **Multiple-circuit control**
2 Loop
3 Combined thermal current
4 Combined pivoted and reciprocating contact
5 Multiple switch
6 Pivoted contact
7 Combined types
8 Radial contact pressure
9 Plural switch
10 Arc extinguishing and preventing
11 Dial type
12 Electromagnetic release
13 Plural switch
14 Plural switch
15 Knife blade
16 Reciprocating contact
17 Operating means
18 Plural switch
19 **Periodic**
20 Combined
21 Rotary and cam
22 Adjustable
23 Multiple contact
24 Rotary
25 Adjustable
26 Radial contact pressure
27 Cam operated
28 Rotary
29 Adjustable
30 Cam operated
31 Adjustable
32 Liquid contact
33 **Retarded**
34 Dashpot
Retarded
35 Clock train
36 Rotary
37 Multiple contact
38 Cam operated
39 Latch trip
40 Motor release
41 Weight release
42 **Unauthorized-use preventing**
43 Permutation switch
44 Lock
45 Permutation
46 **Pattern-sheet controlled**
47 **Limit switch**
48 **High-potential type**
49 **Pole switch**
50 **Interlocking**
51 **Combined with or actuated by connector coupling**
51.01 Candle-simulating assembly
51.02 Multiple coupling
51.03 Multiple circuit control, selective
51.04 Plural switch
51.05 Multiple circuit control, selective
51.06 Three-or-more-contact coupling
51.07 Plural-position coupling
51.08 Bayonet-coupling
51.09 Coupling-actuated switch
51.10 Switch closing on coupling separation
51.11 Switch in parallel with coupling contacts
51.12 Meeting contacts of coupling members forming switch contacts
51.13 Bayonet-coupling
51.14 Screw-coupling
Combined with or actuated by connector coupling
Screw-coupling
51.15 Pull-chain switch
51.16 Push-button switch
51.17 Rotatable-key switch
52 **Special application**
53 Valve
54 Door or sash
55 Lock
56 Indicating instrument
57 Letter box
58 Tire
59 Lever or wheel shaft
60 Portable light
61 Incubator
Snap
62 Auxiliary snap contact
63 Rotating contact
64 Push or pull
65 Detent
66 Radially movable
Oscillating contact
67 Double snap
68 Cam or wedge release
69 Two button
70 Latch trip
71 Two button
72 Two button
73 Single snap
74 Latch trip
75 Two button
76 Reciprocating contact
77 Cam or wedge release
78 Latch trip
79 **Suspended-wire controlled**
80 **Centrifugal**
81 **Fluid pressure**
81.4 Plural switch
81.5 With plural operators
81.6 Operable to cause liquid contact flow
81.8 Bourdon tube type
82 Piston
83 Diaphragm
84 **Float**
85 **Weight**
86 Treads
87 **Electromagnetic**
88 Combined thermal current
89 Nonclosable
90 Periodic
91 Alternating current
92 Motor
93 Polarized
94 Predetermined current
95 Magnetic-pull adjustment
96 Automatic
97 Retarded
98 Multiple magnet
99 Aligned
100 Core armature
101 Core armature
102 Multiple coil
103 Multiple armature
104 Multiple contact
105 Step by step
106 Latch trip
107 Multiple switch
108 Retarded
109 Trips
110 Moving coil
111 Core armature
112 Liquid contact

113 **Thermal current**
113.5 Electric space discharge heated type
114 Combined switch
115 Combined lightning arrester
115.5 Combined connector
116 Latch trip
117 Tensioned fuse
118 Shunt-circuit closing
119 Overfusing preventing
120 Arc preventing and extinguishing
121 Indicators
122 Heater
123 Fusible
124 Self soldering
125 Successive
126 Automatic
127 Expulsion type
128 Auxiliary cartridge
129 Plug and socket
130 Plug
131 Tube or cartridge
132 Terminal cap
133 Blocks and casings
134 Terminals and clips
135 Fusible elements
136 **Thermal**
136.5 Combined with connector coupling
137 Expansible solid
138 Composite bar
139 Adjustable
140 Expansible fluid
141 Expansible fluid contact
142 Fusible, combustible, or explosive
143 Cable
144 **Arc preventing and extinguishing**
145 Multiple break

Arc preventing and extinguishing
146 Auxiliary shunt
147 Magnetic blow-out
148 Air-current blow-out
149 Interposed nonconductor
150 Liquid
151 Solid
152 **Liquid contact**
153 **Mechanical**
154 Quick break
155 Rotating
156 Push or pull
157 Handgrip
158 Screw
159 Push button
160 Single-stroke make and break
161 Pull
162 Knife blade or plug
163 Reciprocating
164 Rubbing or brush contact
165 Face or normal contact
166 **Details**
167 Indicators
168 Casings and bases
169 Latch
170 Contact-pressure adjustment
171 Blade or pole plate
172 Handles or buttons

201 RESISTANCES AND RHEOSTATS

48 **Rheostats**
49 Lamp socket
50 Compressible
51 Pile
52 Spring
53 Embedded resistance
54 Pile
55 Continuous resistance
56 Helix
57 Liquid
58 Penetration
59 Reel
60 Tapering
61 Plug boxes
62 Rectilinear slide
63 **Resistance elements**
64 Embedded
65 Fluid
66 Granular
67 Incased coils
68 Piles
69 Zigzag grids
70 Zigzag helix
71 Compound helix
72 Granular
73 Lamellar
74 Ribbon
75 Carbon
76 Composition

202 DISTILLATION

1 **Miscellaneous**
2 **Processes**
3 Separatory and thermolytic
4 Autothermic
5 Thermolytic
6 Autothermic
7 With residue quenching
8 Distilland projected into heated chamber
9 Incomplete thermolysis
10 Vacuum
11 With extraction
12 Heating
13 Electric
14 Heated solid
15 Heated fluid
16 Cyclically circulated
17 Distilland projected
18 Bath
19 Products of combustion
20 Distinct temperature stages
21 Exothermic
22 Distilland transferred
23 With fluid injection
24 From same body of distilland
25 With distilland treatment
26 Compression and briquetting
27 Preheating
28 Agitation
29 Distilland arrangement
30 Distillate treatment
31 Residue treatment
32 Foam control
33 Distilland composition
34 Noncarbonaceous addition
35 Products

Processes
36 Charging and discharging
37 Residue quenching
38 Decarbonizing and cleaning
39 Separatory
40 Rectification
41 Two components
42 Azeotropic mixtures
43 Dealcoholizing
44 Recovery from containers
45 Multiple effect
46 Convective distillation
47 With indirect heating
48 Convective medium cyclically circulated
49 Medium cyclically circulated
50 Vapor yielding addition
51 System under pressure
52 Still under vacuum
53 Heating and pressure release
56 With distilland treatment
57 Chemical
59 Oxidation or reduction
60 Liquid addition and decantation
61 Preheating
62 Cooling
63 Agitation or circulation
64 Spraying or filming
65 Distilland composition
66 With volatile treatment
67 Absorption and chemical union
68 Chemical dehydration
69 Fractional condensation
70 With residue treatment

Processes
Separatory
71 With condensate treatment
72 Heating
73 Distinct temperature stages
74 Direct liquid bath
75 Fluid compressions and expansion
76 Products of distillation
81 **Apparatus**
82 Systems
83 Portably mounted
84 Separatory and thermolytic
85 Thermolytic and autothermic
86 Retort and kiln
87 Retort heated by combustion
88 Kiln and directly heated chamber
89 Interchangeable
90 Chamber externally heated
91 Autothermic
92 Open kiln
93 Closed kiln
94 With steam generator
95 With residue quencher or cooler
96 Thermolytic
97 Stalls
98 Tunnels
99 Directly heated chamber
100 Rotary chamber
101 Dome ovens
102 Hearths
103 Distilland transferring
104 Vertical series
105 Retort

Apparatus
Systems
Thermolytic
Retort
106 With steam generation
107 With digester
108 With direct heating
109 With cyclic volatile circulation
110 With distilland pressure
111 With recuperators and regenerators
112 With distillate-fixing chamber
113 Plural
114 Common heating furnace
115 Annularly arranged
116 Vertical and horizontal or inclined
117 Conveying
118 Screw
119 Reciprocating
120 Vertical
121 With fluid injection
122 With recuperator
123 With regenerator
124 With heating chamber
125 Alternate reverse-flow flues
126 Vertical flues
127 Circumvallate flues
128 Inclined
129 With fluid injection
130 With regenerator or recuperator
131 Rotary
132 Gas bench

Apparatus
Systems
Thermolytic
Retort
133 Horizontal
134 With fluid injection to retort
135 Plural gas and/or air admission
136 Rotary
137 With heating chamber
138 With flues
139 Vertical
140 With recuperators
141 With reversible regenerators
142 Alternatively poor and/or rich gas fuel
143 Regenerators reversing along the system
144 Regenerators reversing across the system
145 Horizontal
146 With regenerators
147 Gas bench
148 With recuperator
149 With fluid injection
150 Preheating
151 Combustion control devices
152 Separatory
153 Still and column
154 Plural columns
155 Plural stills
156 Parallel

202. DISTILLATION—Continued.
Apparatus
Systems
Separatory
158 Column
159 With preheater,
160 Automatic temperature and/or pressure control,
161 Partial reflux condenser,
162 Vapor-element by-pass,
163 Still
164 Recovery from containers,
165 Still and stove,
166 Still and stand boiler,
167 Still and feed-water heater,
168 Still and extractor
169 Continuous extraction,
170 Still extractor,
171 With reaction chamber,
172 Plural
173 Series
174 Multiple effect,
175 With agitator,
176 With distilland treating devices
177 Preheater
178 Straining,
179 Dephlegmating,
180 Condensing,
181 Level control,
182 With vapor-treating devices
183 Still and absorber
184 Still absorber,
185 Condenser
186 Plural,
187 Concentric with still,
188 Still supporting,

202. DISTILLATION—Continued.
Apparatus
Systems
Separatory
Still
With vapor-treating devices
Condenser
189 Still supported
190 Cap (or closure)
191 Jacketed
192 Still feeding
193 Distilland-level control,
194 Still feeding,
195 Still feeding
196 Distilland-level control,
197 With separator,
198 Dephlegmator,
199 Doubler,
200 Filter,
201 Aerator,
202 With condensate-treating devices
203 Aeration,
204 Decanter,
205 Vacuum,
206 Automatic heat control,
Types
Separatory and thermolytic
207 Stump stills,
208 Directly heated chamber,
209 Still retort,
Autothermic
210 Heap,
211 Kiln
212 Arched,
213 Portable and/or knockdown,
214 Bottom discharge,

202. DISTILLATION—Continued.
Apparatus
Types
Thermolytic
215 Directly heated chamber
216 Rotary,
217 Retort
218 Rotary and/or tilting,
219 Molten bath,
220 Flued,
221 Vertical,
222 Structural features
223 Wall,
224 Shields,
225 Cores,
226 Residue treatment,
227 Quencher
228 Gas or vapor circulating,
229 Submersible chamber,
230 Conveyor type,
231 (Withdrawn)
Separatory
232 Still
233 Directly and indirectly heated,
234 Directly heated,
235 Indirectly heated,
236 Spray forming and filming,
237 Tubular,
238 Rotary and/or tiltable,
239 Elements
240 (Withdrawn)
241 Cleaning and decarbonizing,
242 Closures
243 Fluid cooled,
Dome ovens
244 Trunnel heads and lids,
245 Removable,
246 Hinged,

202. DISTILLATION—Continued.
Apparatus
Elements
Closures
247 Horizontal retort
248 Coke-oven type,
249 Rotary retort,
250 Top
251 Charging,
252 Bottom
253 Cooling or quenching,
254 Offtakes
255 Dip pipes and mains
256 Valved,
257 Plural,
258 Valved,
259 Jacketed,
260 Cooled,
261 Residue offtakes,
262 Feeding and discharging
263 Smoke escapes,
264 Foam control,
265 Agitating,
266 Distilland supports and containers,
267 Materials of construction,
268 Expansion provisions,
269 Air and gas seals,
270 Accessories and details.

203 NO CLASS.

204 CHEMISTRY, ELECTRICAL AND WAVE ENERGY.

Processes and products

1 Electrolysis
2 Electroprinting,
3 Electroforming
4 Reproductions
5 Recording devices,
6 Printing plates, electrotypes, dies, and the like,
7 Mirrors and reflectors,
8 Ornamental,
9 Rolls, rings, or hollow bodies,
10 Powder, flakes, or colloidal suspensions,
11 Perforated or foraminous articles,
12 Sheets, webs, wires, filaments
13 Of indeterminate length,
14 Coating
Specific shapes, forms, or configurations
15 Localized areas
16 Uniting and repairing,
17 Printing members,
18 Designs and ornamentation,
19 Mirrors and reflectors,
20 Non-conducting base
21 Textile fabrics,
22 Sheets and plates,
23 Conducting base
24 Perforated or foraminous,
25 Cylinders, rolls, or hollow articles
26 Internal coating,
27 Sheets, webs, wires, filaments
28 Of indeterminate length,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Processes and products

Electrolysis
Coating
Combined
29 With base treatment
30 Non-conducting base
31 Water-proofing,
32 Cleaning or etching
33 Aluminum base,
34 Ferrous base,
35 With treatment of the coating
36 Brightening and burnishing,
37 Heat treatment,
38 With other coating methods,
39 From fused bath,
From aqueous bath
40 With multiple layers
41 Chromium layer,
42 Anodic layer or film,
43 Alloys
44 Copper containing,
45 With single metal
46 Precious metals
47 Platinum metals,
48 Iron group metals (iron, nickel, cobalt)
49 Nickel,
50 Cadmium,
51 Chromium,
52 Copper,
53 Lead,
54 Tin,
55 Zinc,
56 With non-metals
57 Peroxides,
58 Aluminum base,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Processes and products

Electrolysis
59 Synthesis
60 From fused bath
61 Compounds
62 Organic,
63 Inorganic nitrogen containing,
64 Metals
65 Beryllium,
66 Lead or zinc,
67 Aluminum,
68 Alkali-forming
69 Alkaline earth metals
70 Magnesium,
71 Alloys,
From aqueous bath
72 Organic compounds
73 Hydrogenation
74 Of nitrogenous radicals,
75 Of carbonylic radicals
76 Acyclic
77 Production of alcohols,
78 Oxidation
79 Of acyclic compounds
80 Hydrocarbons,
81 Halogenation,
Inorganic compounds
82 Per-compounds
83 Peroxides
84 Hydrogen peroxide,
85 Perborates,
86 Metallic salts
87 Carbonates
88 Of lead,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Processes and products

Electrolysis
Synthesis
From aqueous bath
Inorganic compounds
Metallic salts
89 Chromium containing,
90 Phosphorus containing,
91 Nitrogen containing,
92 Sulfur containing
93 Sulfates,
94 Halogen containing
95 Oxyhalogen,
96 Metallic oxides and hydroxides
97 Of chromium,
98 Of alkali-forming metals
99 Mercury cathode,
100 Of alkaline earth metals,
101 Non-metallic compounds
102 Ammonia and ammonium hydroxide,
103 Acid and acid anhydrides
104 Sulfuric,
105 Metallic elements
106 Copper
107 Halogenating leach,
108 Sulfating leach,
109 Precious metals
110 Cyaniding leach,
111 Halogenating leach,
112 Iron group metals (iron, nickel, cobalt)
113 Halogenating leach,
114 Lead, zinc, cadmium
115 Reduction at the cathode,
116 Alkali hydroxide leach,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Processes and products

Electrolysis
Synthesis
From aqueous bath
Metallic elements
Lead, zinc, cadmium
117 Halogenating leach
118 Zinc,
119 Sulfating leach,
120 Tin
121 Alkali hydroxide leach,
122 Halogenating leach,
123 Alloys
124 Of mercury
125 With alkali-forming metal,
126 With precious metals
127 Cyaniding leach,
128 Non-metallic elements
129 Hydrogen or oxygen,
130 Material treatment
131 Organic materials
132 Fibrous
133 Bleaching,
134 Dyeing,
135 Hides or skins,
136 Hydrocarbon oils,
137 Foods or beverages
138 Sugar,
139 Alcoholic,
140 Metals and metallic alloys
141 Cleaning or etching
142 Sharpening or pointing,
143 Etching localized areas,
144 Cleaning by internal battery action,
145 Cleaning ferrous metals,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Processes and products

Electrolysis
Material treatment
Metals and metallic alloys
146 Stripping,
147 Object protection
148 Internal battery action,
149 Water, sewage, and other waste waters
150 Internal battery action,
151 Diaphragm,
152 With filtering,
153 Alkali-forming metal hydroxides,
154 Electrical, radiant or wave energy chemistry
155 Magnetic field
156 With discharge,
157 Electromagnetic waves
158 Organic
159 Vitamins,
160 Rubber or vulcanizable natural hydrocarbon gums,
161 Fats, fatty oils, ester type waxes or higher fatty acids,
162 Hydrocarbons
163 Halogenated,
164 Electrostatic field or electrical discharge
165 Organic
166 Vitamins,
167 Fats, fatty oils, ester type waxes or higher fatty acids,
168 Hydrocarbons
169 Halogenated or oxidized,
170 Gaseous
171 Acetylene,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Processes and products

Electrical, radiant or wave energy chemistry
Electrostatic field or electrical discharge
Organic
Hydrocarbons
172 Cracking hydrocarbon oils,
173 Carbon,
174 Sulfur-oxygen compounds,
175 Hydrogen peroxide,
176 Ozone,
177 Nitrogen compounds
178 Arc or spark discharge
179 Nitrogen oxides,
180 Electrophoresis or electro-osmosis
181 Coating or forming
182 Rubber or vulcanizable natural hydrocarbon gums
183 Sheets, webs, wires or filaments of indeterminate length,
184 Separation or purification of hydrocarbon oils
185 Aqueous systems,
186 Electrical separation or purification of liquids
187 Electromagnetic field,
188 Hydrocarbon oils
189 With addition of dielectric fluid,
190 With addition of water or other modifying agent,
191 Modified alternating current waves,
192 Coating or forming by cathode sputtering.

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

193 **Apparatus**
194 Electrolytic
195 Analysis and testing,
196 Object protection
197 Internal battery,
With movable electrode means
198 Work conveyor
199 Rotary
200 With base treatment,
201 Loose article,
202 Endless
203 With base treatment
204 With current control,
205 With current control,
206 Continuous strip or filament electrode
207 With base treatment
208 Stripping,
209 Mechanical working,
210 Heat treatment means,
211 With current control,
212 Rotary
213 Barrels and rotary receptacles
214 Swinging or tilting receptacle,
215 With base treatment
216 Stripping,
217 Mechanical working,
218 With current control,
219 Liquid electrode
220 With electrode recirculation means,
221 With oscillator, reciprocator or agitator,
222 Electrode oscillator, reciprocator or agitator
223 With current control,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Apparatus

Electrolytic
With movable electrode means
224 Localized area applicators,
225 Electrode feeding or withdrawal means
226 With base treatment,
227 Cells with base treatment means,
228 Cells with current control means
229 With fluid pressure, flow or level intercontrol
230 Gaseous fluid,
231 Auxiliary electrode,
232 Cells with electrolyte treatment means
233 Leacher, dissolver or extractor
234 Recirculation
235 With filter,
236 With heater or cooler,
237 Recirculation
238 With filter,
239 With heater or cooler,
240 With filter,
241 With heater or cooler,
242 Cells
243 Fused bath
244 Plural cells,
245 With feeding and/or withdrawal means
246 Gas feeding,
247 Gas withdrawal,
248 Internal battery
249 Filter or loose electrode type,
250 Liquid electrode
251 Diaphragm type,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Apparatus

Electrolytic
Cells
252 Diaphragm type
253 Plural cells
254 Bipolar electrode
255 With feeding and/or withdrawal means
256 Gas,
257 With feeding and/or withdrawal means
258 Gas,
259 Basket type electrode,
260 Concentrically arranged electrodes,
261 With agitator,
262 With heater or cooler,
263 With feeding and/or withdrawal means
264 And filter,
265 Gas feeding,
266 Gas withdrawal,
267 Plural cells
268 Bipolar electrode,
269 With feeding and/or withdrawal means
270 Gas,
271 Portable,
272 Concentrically arranged electrodes,
273 With agitator,
274 With heater or cooler,
275 With feeding and/or withdrawal means
276 And filter,
277 Gas feeding,
278 Gas withdrawal,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Apparatus

Electrolytic
279 Elements
280 Electrodes
281 Electroforming molds or strip plates,
282 With diaphragm
283 Perforated or foraminous electrode,
284 Perforated or foraminous
285 Work holder,
286 With electrode supporting means
287 Work container,
288 Electrodes with lateral extensions,
289 With lateral extensions,
290 Laminated or coated,
291 Composition
292 Metallic
293 Alloys,
294 Carbon containing,
295 Diaphragms
296 Organic,
297 Electrode supports and workholders,
298 Cathode sputtering,
299 Electrophoretic or electro-osmotic
300 With electrode moving means,
301 With diaphragm,
302 Electrical separation or purification of liquids
303 Electromagnetic,
304 With electrode moving means,
305 With current control means
306 With fluid pressure, flow or level intercontrol,

204. CHEMISTRY, ELECTRICAL AND WAVE ENERGY—Continued.

Apparatus

Electrical separation or purification of liquids
307 With agitator or vibrator,
308 With heating or cooling means,
309 Magnetic
310 Object protection,
311 With electrical discharge means,
312 Electrostatic field or electrical discharge
313 Ozonizers
314 With preparatory or product treatment means,
315 With electrode moving means,
316 With current control or special supply means
317 With transformer
318 With fan, blower, or pump,
319 With fan, blower, or pump,
320 Cylindrical electrode
321 With heating or cooling means,
322 With heating or cooling means,
323 Arc or spark discharge means
324 With preparatory or product treatment means,
325 With electrode moving means
326 With current control means,
327 With current control means,
328 With heating or cooling means.

205 METAL DRAWING

1 **Miscellaneous**
9 **Tube welding**
10 Laterally movable drawhead
11 Die and mandrel
12 Processes
3 **Bars and tubes**
4 By thrust
5 Hydraulic drive
6 Screw drive
7 Backing mandrel
8 Processes
16 **Wire**
13 Multiple die
14 Tandem
15 Rotary
17 Covering
18 Processes
19 Lubricating
20 Drawing drums
21 Processes
25 **Die holders**
26 **Dies**
27 Skelping
28 Welding
29 Wire
22 **Appliances**
23 Tags
24 Tongs
2 **Processes**

0.4 **For getters or gas or vapor generating materials**
0.5 **Infusion containing**
0.6 **For gas**
0.7 With gas storing absorbent or solvent
0.80 **For coins (e. g., mats)**
0.81 Combined
0.82 With closing or fastening means
0.83 Multiple pocket or compartment
0.84 Multiple pocket or compartment
1 **Receptacles**
1.5 With structural locking modification
3 Ammunition
4 Camp and lunch kits
5 Eyeglass or spectacle
6 Hinged parts
7 Garment
8 Hat and headwear
9 Racks, frames, and rings
11 Fur
12 Medicine chests
13 Musical instruments
14 Violin
15 Phonograph cylinders
15.1 Brush
16.5 Thermometer
16.6 With antiseptic
16 Tools and appliances
17 Bits and drills
17.5 Syringes
18 Watch movements
19 Sacramental
19.5 Vehicle attached
20 Match safes
29 Match packages
30 Side supported
31 Box holders and convertible boxes

Receptacles
Match safes
33 Pocket
33.4 Single delivery
33.5 Withdrawal igniting
33.6 Ejecting
34 Withdrawal igniting
35 With wind guards
36 Scratchers and wind guards
37 Pocket and personal use
38 Combination
39 Ticket cases
40 Ejecting
40.5 Ticket holders
40.6 With shearing means
41 Cigars and tobacco
41.1 Dispensing type
41.2 Cigars and cigarettes
41.3 With igniter
41.4 With igniter
41.5 With cutter
42 Pellets and granules
43 Hypodermic syringes, etc.
44 Display
45 Terraced or stepped shelves
2 Acid proof
10 Insect proof
72 Trays
73 Card or sheet
74 With follower
75 Jewelry and silverware
76 Ring
77 Stock and sample
46 **Packages**
47 Combination
48 Matches with cigarettes, etc.
48.5 Tobacco products

Packages
49 Embroidery, laces, and ruching
50 Cloth bolts, boards, etc.
51 Ribbons, braids, and trimmings
Rolls or spools
52 Inclosed
53 Clamps
54 Centrally attached
55 Layer retained
63 Stationery
63.2 Surgical supplies
63.3 Ligatures
63.4 Vaccine points
63.5 Dental
64 Thread
66 Needles and pins
67 Pencils, etc.
68 Incandescent mantles
69 Rubber bags and tubing
70 Watch springs
71 Metallic leaf
Multiple article
65 Nested, stayed, or interbraced
56 Dispensing
57 Paper sheets
58 Paper rolls
59 Rolls and reels
60 Plates and sheets
61 Fly paper
62 Fragile and sensitive
78 Display
79 Single blank
80 With added securing means
81 Color and paint
82 Sample
83 Teeth
84 Chemicals

206. SPECIAL RECEPTACLES AND PACKAGES—Continued.

Packages

63.2 **Surgical supplies**
63.3 Ligatures,
63.4 Vaccine points,
63.5 Dental,
64 Thread,
66 Needles and pins,
67 Pencils, etc.,
68 Incandescent mantles,
69 Rubber bags and tubing,
70 Watch springs,
71 Metallic leaf,
Multiple article
65 Nested, stayed, or interbraced,
56 Dispensing
57 Paper sheets,
58 Paper rolls,
59 Rolls and reels,
60 Plates and sheets
61 Fly paper,
62 Fragile and sensitive,
78 Display
79 Single blank,
80 With added securing means,
81 Color and paint,
82 Sample,
83 Teeth.

207 PLASTIC METAL WORKING.

1 **Miscellaneous.**
2 **Die expressing**
3 Plunger and mandrel
4 Tubular mandrel,
5 Bridge mandrel,
6 Integral
7 Fixed plunger,
8 Rotary plunger,

207. PLASTIC METAL WORKING—Continued.

Die expressing

9 Plunger,
10 Processes.
15 **Containers.**
16 **Cooling and heating.**
17 **Dies**
18 Variable opening.
19 **Mandrels.**

208 NO CLASS.

209 CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS.

1 **Miscellaneous.**
2 **Special applications.**
3 **Treatment precedent**
4 Selective differentiation
5 Deflocculation and flocculation,
6 Disintegration,
7 Form,
8 Magnetizing and demagnetizing,
9 Surface.
10 **Treatment subsequent.**
11 **With heat treatment.**
12 **Combined operations**
13 Aqueous suspension, sifting and stratifying,
14 Mercurial adhesion, sifting and stratifying,
15 Fluid suspension and mercurial suspension or adhesion
16 Aqueous suspension,
17 Aqueous suspension and sifting,
18 Aqueous suspension and stratifying,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Contd.

Combined operations

19 Gaseous suspension, sifting and stratifying,
20 Gaseous suspension and stratifying,
21 Gaseous suspension and sifting
22 Coincident
23 With deposition,
24 Horizontal current
25 With deposition,
26 Inclined current
27 With deposition,
28 Vertical current
29 With deposition,
30 Successive
31 With deposition,
32 Horizontal current
33 With deposition,
34 Inclined current
35 With deposition,
36 Vertical current
37 With desposition,
38 Magnetic and sifting,
39 Magnetic and fluid suspension,
40 Magnetic and stratifying,
41 Mercurial suspension and mercurial adhesion,
42 Mercurial adhesion or suspension and sifting,
43 Mercurial adhesion or suspension and stratifying,
44 Sifting and stratifying,
45 **Adhesion**
46 With selective differentiation
47 Coating
48 Mercurial (amalgamators),

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Contd.

Adhesion

49 Coated surface or mass
50 Mercurial
51 Applying or removing coat,
52 Contact elements
53 Agitators,
54 Baffles.
55 Disks and spheres,
56 Liners,
57 Percolators,
58 Receivers
59 Rotating
60 Centrifugal,
61 Cylinders, external
62 Cylinders, internal,
63 Endless belt,
64 Shaking,
65 With agitating or conveying
66 Fluid,
67 Grinding or rubbing,
68 Impact,
69 Reciprocating,
70 Rotating.
71 **Assorting**
72 Automatic
73 With feeding,
74 With discharging,
75 Plural type,
76 Entangling
77 Bars and brushes,
78 Rotating surface,
79 Compressing,
80 Conforming,
81 Electroconductive,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Contd.

Assorting
Automatic
82 Gauging
83 Apertures
84 Belts,
85 Chutes and tables,
86 Cylinders,
87 Disks,
88 Calipering
89 Clamps,
90 Carrier and detent or deflector
91 Rotating detent,
Pockets
92 Belts,
93 Chutes or tables,
94 Cylinders, external,
95 Cylinders, internal,
96 Disks,
97 Slots
98 Bars
99 Parallel paths,
100 Bar and belt,
101 Bar and roller,
102 Belts,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Contd.

Assorting
Automatic
Gauging
Slots
103 Belt and roller,
104 Disks,
105 Disk and ring,
106 Rollers
107 Parallel paths,
108 Gripping,
109 Penetrating
110 Perforated article (cards),
111 Color,
Rolling incline
112 Chutes and tables,
113 Cylinders,
114 Belts,
115 Trajectory
116 Friction surface
117 Deviating,
118 With gaps,
119 Rebound,
120 Throwers,
121 Weighing,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Contd.

Assorting
122 Manual
123 Chutes and tables
124 Rotating,
125 Belts,
126 Implements.
127 **Electrostatic**
128 Attracting and repelling,
129 Attracting,
130 Repelling,
131 Stratifying,
132 **Fluid suspension**
133 Gaseous
134 Horizontal current
135 With deposition,
136 Inclined current
137 With deposition,
138 Vertical current
139 With deposition,
140 Expanding
141 With deposition,
142 Grading deposition
143 With deflection
144 Vortical,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Contd.

Fluid suspension
Gaseous
145 Impetus and countercurrent,
146 Feeding
147 Conveyer
148 Centrifugal,
149 Chute,
150 Disk or cone,
151 Stepped plane,
152 Cylinder, internal,
153 Tossers,
154 Current control,
155 Liquid
156 Horizontal current,
157 Inclined current,
158 Vertical current
159 With agitation,
160 Expanding
161 With agitation,
162 Floating
163 Buoyant material
Bubbles
164 Processes
165 Preferential,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Fluid suspension
Liquid
Floating
Buoyant material
Bubbles
Processes
166 With modifying agents
167 Preferential,
168 Apparatus
169 Agitating,
170 Pneumatic,
171 Oil,
172 Gravity liquid
173 Aqueous,
174 Metallic (amalgamators)
175 Processes
176 With chemical treatment
177 Bath,
178 Ore,
179 With electric treatment
180 Bath,
181 Ore,
182 With heat treatment,
Feeding and distributing
183 Submerging
184 Conveyer,
185 Vacuum,
186 With agitation
187 Baffles,
188 Agitators,
189 Surface
190 Impact,
191 With grinding or rubbing,
192 Feeding and discharging
193 Bath,
194 Receptacles
195 Reciprocating
196 Chutes and tables,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Fluid suspension
Liquid
Floating
Gravity liquid
Metallic (amalgamators)
Receptacles
Reciprocating
197 With agitators,
198 Rotating
199 Centrifugal,
200 With agitators,
201 Stationary
202 Chutes and tables,
203 With agitators
204 Reciprocating,
205 Rotating,
206 Riffles and traps,
207 Surface film tension,
208 Grading deposition
209 Chronometric,
210 With deflection,
211 Vertical.

Magnetic
212 Diamagnetic,
213 Paramagnetic
214 Processes,
215 Special applications,
216 Multiple type,
217 Reciprocating magnets,
Rotating magnets
218 Belt,
219 Cylinder external
220 Vertical axis,
221 Cylinder internal,
222 Disk,
223 Stationary magnets
224 Cylinder internal,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Magnetic
Paramagnetic
225 With agitating or conveying
226 Magnetic
227 Traveling field,
228 Discharging
229 Doffers
230 Magnetic,
231 Feeding
232 Fluid suspension.
233 **Sifting**
234 Combined type,
235 Special applications
236 Distributing,
237 Material testing,
238 With heating or cooling,
239 With weighing,
240 Feeding and discharging
241 Conveyers,
242 Interconnected,
243 Feeding
244 Hoppers
245 With agitators or conveyers,
246 Cut-offs and valves,
247 Conveyers
248 Receptacles
249 Ash pan,
250 Fluid,
251 Reversible,
252 Sifter movement,
253 Selective,
254 Distributers or spreaders,
255 Discharging
256 Conveyers and valves,
257 Conveyers,
258 Valves,
259 Receptacles,
260 Tilting,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Sifting
261 Conveying
262 Material forcing,
263 Material positioning
264 Guides
265 Imperforate sections,
266 Superposed,
267 Retarders,
268 With liquid treatment
269 Reciprocating sifters,
Rotating sifters
270 Drum,
271 Disk,
272 Endless belt,
273 Stationary sifters,
274 Concave and convex sifters
275 Reciprocating
276 With agitators
277 Reciprocating,
278 Rotating,
279 Rotating
280 With agitators,
281 Stationary
282 With reciprocating agitators,
283 With rotating agitators,
Drum sifters
Horizontal and inclined
284 Feeding or discharging
285 Peripheral feed
286 Inlets,
287 Reciprocating and rotating,
288 Rotating
289 Multiple
290 Concentric
291 Nested,
292 Superposed,

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209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Sifting

Drum sifters
Horizontal and inclined
Rotating
293 With agitators and conveyers
294 Lifters and deflectors,
295 Pneumatic,
296 Rotating
297 Attached,
298 Lifters,
299 Lifters and beaters,
300 Stationary,
Vertical
301 Reciprocating and rotating,
302 Reciprocating,
303 Rotating
304 With agitators,
305 Stationary
306 With agitators,
307 Endless belt sifters
308 With agitators,
Plane sifters
Horizontal and inclined
309 Reciprocating and rotating,
Reciprocating
310 Distorting,
311 Multiple
312 With pneumatic treatment,
313 Alined,
314 Stepped,
315 Superposed
316 With intermediate conveyers,
317 With dischargers,
318 With pneumatic treatment,
319 Attaching and adjusting,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Sifting

Plane sifters
Horizontal and inclined
Reciprocating
320 With agitators and conveyers
321 Pneumatic,
322 Reciprocating
323 Unattached,
324 Rotating,
325 With horizontal and vertical shake
326 Gyratory,
327 Lateral
328 With impact,
329 Longitudinal
330 With impact,
With horizontal shake
331 Longitudinal and transverse
332 Gyratory,
333 Lateral
334 Impactive,
335 Pivoted
336 With impact,
337 Sliding
338 With impact,
339 Swinging
340 With impact,
341 Longitudinal
342 Sliding
343 With impact,
344 Swinging
345 With impact,
346 With vertical shake
347 Impactive,
348 Pivoted
349 With impact,
350 Rotating
351 With agitators,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Sifting

Plane sifters
Horizontal and inclined
352 Stationary
353 Multiple
354 Stepped,
355 Superposed
356 Zigzag,
With agitators,
357 Reciprocating,
358 Rotating,
359 Vertical
360 Reciprocating,
361 Rotating,
362 Spiral sifters,
363 Elements
364 Actuating
365 Reciprocating
366 Gyrating
366.5 Unbalanced weight,
367 Unbalanced weight,
368 Magnetic,
369 Rotating,
370 Bins and casings
371 Adapters,
372 Closures,
373 Compartments and receptacles,
374 Household
375 Chutes,
376 Hods,
377 Stoves and furnaces,
378 Venting,
379 Clearers
380 Fluid,
381 Jarring
382 Knockers,
383 Whips,
384 Pressers,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Sifting

Elements
Clearers
385 Wipers
386 Brush,
387 Reciprocating
388 Brush,
389 Rotating
390 Brush,
391 Mesh closures,
392 Dress
393 Bars
394 Adjusting,
395 Attaching,
396 Reciprocating,
397 Perforated sheet
398 Adjusting,
399 Attaching,
400 Cords and wires,
401 Woven
402 Adjusting,
403 Attaching,
Frames
404 Adjusting,
405 Attaching,
406 Drum
407 Sectional,
408 Plane,
409 Supports
410 Axial,
411 Rim,
412 Framework
413 Adjustable,
414 Knockdown,
415 Hangers and standards,
416 Levelers,
417 Manual
418 Scoop,

Sifting
Elements
Supports
Manual
419 Shovel,
420 Portable
421 Vehicles.
422 **Stratifiers**
With liquid treatment
Movable bed
Permeable
423 Constant current
424 Divergent or opposite travel,
425 Pulsating current
426 Divergent or opposite travel,
427 Parallel travel,
428 Belt
429 Divergent travel,
430 Opposite travel,
431 Reciprocating support
432 Divergent travel,
433 Opposite travel,
Chutes and tables
434 Spiral,
435 Reciprocating-rotating
436 Divergent or opposite travel,
437 Reciprocating
438 Annular
439 Divergent or opposite travel,
440 With agitators,
441 Divergent travel,
442 Opposite travel,
443 Parallel travel,
444 Rotating,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Stratifiers
With liquid treatment
Receptacles
445 Reciprocating-rotating,
446 Reciprocating
447 Manual support,
448 With agitators,
449 Reciprocating,
450 Rotating,
Rotating
451 Horizontal or inclined axis
452 With agitators or conveyers,
453 Vertical axis,
Stationary bed
Permeable
454 Constant current,
455 Pulsating current
456 Divergent or opposite travel,
457 Parallel travel,
458 Chutes and tables
459 Annular, circular or spiral,
460 With divergent or opposite travel,
Receptacles
461 With agitators or conveyers
462 Reciprocating,
463 Rotating
464 Horizontal or inclined axis,
465 Vertical axis,
With pneumatic treatment
Movable bed
Permeable
466 Constant current
467 Divergent or opposite travel.

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Stratifiers
With pneumatic treatment
Movable bed
Permeable
468 Pulsating current
469 Divergent or opposite travel,
470 Belts,
471 Chutes, tables, and receptacles
472 Divergent or opposite travel,
473 Drums,
Stationary bed
Permeable
474 With constant current,
475 With pulsating current
476 Divergent or opposite travel,
477 Chutes, tables, and receptacles,
478 Magnetic,
Movable bed
479 Chutes, tables, and receptacles
480 Divergent travel,
481 Opposite travel,
482 Drums,
483 Stationary bed,
484 Elements
485 Beds
486 Permeable,
487 Cleaners,
488 Feeding and discharging
489 Automatic control,
490 Discharging
491 Automatic control,
492 Conveyers,
493 Dividers and skimmers,
494 Exits
495 With positively operated dis chargers,

209. CLASSIFYING, SEPARATING, AND ASSORTING SOLIDS—Con.

Stratifiers
Elements
Discharging
Exits
496 Automatic control,
497 Feeding
498 Distributing,
499 Regulating,
Fluid supply,
500 Liquid
501 Circuit,
502 Pneumatic,
503 Operating mechanism
504 Reciprocating,
505 Rotating,
506 Riffles
507 Overhung,
508 Supports.

210 LIQUID SEPARATION OR PURIFICATION.

1 **Miscellaneous.**
2 **Sewage purification**
3 With sludge remover,
4 Automatic regulation,
5 Settling and filtering,
6 Settling and septic tanks,
7 Aerating and filtering,
8 Activated sludge.
9 **Water purification**
10 Railway tank,
11 Swimming pool,
12 Systems
13 With lake or reservoir supply,
14 With chemical and heat treatment,
15 With heat treatment,
16 With chemical treatment
17 Proportional feeding
18 Weir or orifice control,
19 Gravity-bucket control,
20 Dipper or movable outlet,
21 Float or motor operated valve,
22 Pump.
23 Chemical treatment
24 Base exchange,
25 Abrasion and aeration,
26 Aeration,
27 Ozonizing,
28 Chlorinating,
29 Chemical feeders
30 Weir or orifice control,
31 Differential-pressure control,
32 Gravity-bucket control,
33 Plural types,
34 Steam or condensed steam,

210. LIQUID SEPARATION OR PURIFICATION—Continued.

Water purification
Chemical treatment
Chemical feeders
35 Abrasion with or without infiltration,
36 Infiltration
37 Boiler-compound holders,
38 Displacement,
39 Gravity and suction,
40 Pump or injector,
41 Motor-operated valve,
42 Dipper or movable outlet.
43 **Decanter and filter**
44 Systems,
45 Filter in overflow,
46 Capillary action,
47 Washing
48 Central submerged oil inlet
49 Multiple compartment,
49.5 With heater or cooler
49.6 With additional fluid introduction,
49.7 With additional fluid.
50 Downward flow.
51 **Decanters**
51.5 Cream separators,
52 Systems,
52.5 With heater or cooler,
52.6 With additional fluid introduction
53 Flotation,
54 Float-controlled outlet,
55 With sediment remover,
56 Lighter constituent trapping,
57 With sediment trap,
58 Sloping bottom, central baffle,
60 Vertical baffle,
61 Cylindrical baffle.

210. LIQUID SEPARATION OR PURIFICATION—Continued.

62 **Filters**
63 Centrifugal extractors
64 Inward flow,
65 Honey,
66 Fluid treatment
67 Liquid,
68 Agitating and conveying
69 Rotary stirrer,
70 Stationary stirrer,
71 Driving mechanism
72 Motor,
73 Discharging residue
74 Bottom discharge,
75 Receiving filtrate,
76 Basket construction,
77 Faucet or valve
78 Valve incorporated
79 With filter drum,
80 Screened plug,
81 Outlet attachment
82 Cleaning
83 Reversible filtering element,
84 Strainers
85 Separable casing,
86 Loose material
87 Separable casing,
88 For cistern supply
89 With side outlet,
90 With clean-out opening
91 With sediment draw-off,
92 Valved
93 Automatic,
94 Pipe intake
95 Drinking,
96 Porous block,
97 Floating,
98 Loose filtering material,

210. LIQUID SEPARATION OR PURIFICATION—Continued.

Filters
99 Household
100 Deflected flow
101 Reversed,
102 Vertical and lateral,
103 Downward flow
104 Plural spaced filter elements,
105 Suspended filtering vessel,
106 Restricted outlet,
107 Side inlet or outlet,
108 Upward flow,
109 Lateral flow
110 Tubular filtering element,
111 Converging or diverging flow,
112 Porous block
113 Systems,
113.5 With heater or cooler,
114 Cleaning
115 Abrasion,
116 Scraper or brush
117 Automatic,
118 Rotary,
119 Stationary,
120 Multiple element,
121 Filter-block only,
122 Loose material
122.1 Systems
122.2 With storage chamber,
122.3 Closed container
122.4 Alternate cleaning,
122.5 With heater or cooler.
123 With chemical feed,
124 Open container
Multiple layer
126 Vertical,
127 Horizontal,

210. LIQUID SEPARATION OR PURIFICATION—Continued.

Filters
Loose material
Open container
128 Cleaning
129 Mechanical stirrer
130 Reverse flow
131 Closed container
134 Multiple layer
135 Vertical
137 Revolving drum
138 Packing
139 Spacing
140 With sediment trap
141 Cleaning
142 Mechanical stirrer
143 With reverse flow
144 Reverse flow
145 Embedded filter element
146 Steam or air blast
147 Automatic
148 Parts and accessories
149 Strainers
150 Systems
150.5 With heater or cooler
150.6 With additional fluid introduction
150.7 Sectional pressure type
150.8 With additional fluid introduction
151 With stirrer or scraper
152 With cleaning mechanism
153 Hollow leaf
154 Cylindrical filter element
155 Detachable
156 Valved
157 With sediment chamber
158 Removable fabric
159 Clamped cloth

210. LIQUID SEPARATION OR PURIFICATION—Continued.

Filters
Strainers
Detachable
160 Filter-sheet-supporting surface
161 Ring and screen only
162 For tea or coffee pots
163 For drinking cups
163.5 Drainers
164 In pipe line
165 With sediment trap
166 Valve
167 Cleaning
168 Multiple strainer valve
169 Strainer element
170 For pipe end
171 For granular bed
172 Flume screens
173 Revolving
174 Revolving arm
175 Endless belt
176 Rake
177 Pressure
178 Separate casing
179 Porous filler
180 Rotary drum
181 Hollow leaf
182 Cleaning
183 Cylindrical filtering element
184 Multiple tube
185 Flat filtering element
186 Conical filtering element
187 With sediment trap
188 Sectional
189 Porous filler
190 Bag
192 Charging and discharging
193 Cleaning

210. LIQUID SEPARATION OR PURIFICATION—Continued.

Filters
Strainers
Pressure
194 Screw conveyer
195 Filter-leaf structure
196 Movable bed
197 Endless belt
198 Cleaning
199 Rotary drum
200 Multiple leaf
Cleaning
201 Scraper or brush
202 Double wall
202.5 Rotary
203 Materials
204 Fibrous unitary mass
205 Porous block
205.5 **Adjustable cover drainers**
206 **Cistern Cleaners**
207 Pump
208 Bailer
209 Bottom draw-off

211 SUPPORTS, RACKS

1 **Miscellaneous**
1.5 **Power operated**
1.6 Rotary
2 **Convertible type**
3 Terraced shelves to table
4 **Article locking**
5 Velocipede type
6 Towel-service type
7 Horizontal-rod type
8 Combined lock and clamp
9 Unlocked, retained key
10 **Sorting type**
11 Desk file
12 Bag holder
13 **Special article**
14 Ball or egg type
15 With discharge mechanism
16 Towel-service type
17 Velocipede type
18 Wall mounted
19 Tire or wheel
20 Tire or wheel
21 Foldable
22 Stands
23 Tire or wheel type
24 Stands
26 Electric-fixture type
27 Furniture type
28 Mattress type
29 Shock type
30 Hat type
31 Ceiling or seat mounted
32 Wall mounted
33 Stands
34 Shoe or boot type
35 Wall mounted
36 With shelves
37 Stands
38 Foldable
39 Hand-stamp type

Special article
40 Phonograph-record type
41 Plate type
42 Book-support type
43 Adjustable
44 Bolt or card
45 Paper or textile sheet type
46 With trackway
47 Pivoted support
48 Wall mounted
49 Stacked-article type
50 Card or sheet
51 With follower
52 Terraced
53 Rotatable
54 With impaling means
55 Terraced pockets
56 Rotatable
57 With impaling means
58 Rotatable
59 With impaling means
60 Slender-article type
61 Shoe-lace type
62 Umbrella or cane
63 Wall mounted
64 Gun
65 Brush and broom
66 Suspended
67 Whip
68 Cue
69 Drill or pencil
70 Rotatable
71 Receptacle support type
72 Of sheet material
73 Single blank
74 Bottle or jar
75 Wall or window mounted
76 With closure
77 Rotatable

Special article
Receptacle support type
78 Rotatable
79 Reciprocable support
80 Pivotal support
81 With pivotal mount
82 With closure operator
83 With closure operator
84 With closure
85 Foldable or collapsible
86 **Specially mounted or attached**
87 Wall or window
88 Tray or receptacle type
89 With article-gripping means
90 Shelf
91 Terraced
92 Pivoted
93 Foldable
94 With trackway
95 Rotatable
96 Pivoted support
97 Vertical and horizontal axis
98 Vertically adjustable
99 Horizontal axis
100 Bar or arm
101 Vertically adjustable
102 Vertically adjustable
103 Vertically adjustable
104 Foldable
105 Lazy tongs
105.1 Single-horizontal-rod type
105.2 Curved or angular end type
105.3 Extensible
105.4 Screw adjusted
105.5 Spring or elastic actuated
105.6 Enclosed spring
106 Of wire

Specially mounted or attached
107 Stovepipe or column
108 Shelf
109 Pivoted
110 Pivoted
111 Horizontal axis
112 Of wire
113 Suspended type
114 Shelf
115 Rotatable
116 Pivoted support
117 Vertically adjustable
118 Knockdown or foldable
119 Of wire
119.01 **Clotheslines, isolated supports**
119.02 Looped lines
119.03 Horizontal plane
119.04 Pulley support inside of building
119.05 Pulley support movable through building opening
119.06 Swingable support
119.07 On vertical axis only
119.08 On horizontal axis only
119.09 With loop tighteners
119.10 Single run line
119.11 With pin or gripper actuator
119.12 With suspended article support
119.13 With article gripper
119.14 Linked lines
119.15 Line tighteners
119.16 Bodily displaceable line
119.17 Vertically translatable
119.18 Line covers
120 **Series spring-grip type**
121 **Endless-carrier type**
122 Horizontal travel
123 **Horizontal-rod type**
124 With article-gripping means

125 **Spiked type**
126 **Tray or receptacle type**
127 With sprinklers
128 Terraced trays
129 Rotatable
130 Foldable
131 Rotatable
132 Foldable
133 Stands
134 **Shelf type**
135 Of sheet material
136 Vertically adjustable
137 Terraced shelves
138 Pivotally adjustable angle of terrace
139 Rotatable
140 Vertically adjustable
141 Vertically adjustable
142 Foldable
143 With trackway
144 Rotatable
145 Horizontal axis
146 Vertically adjustable
147 Vertically adjustable
148 Knockdown
149 Foldable
150 Pivoted shelves
151 With roller mounts
152 Shelves
153 Shelves
162 **With trackway**
163 **Rotatable**
164 Horizontal axis
165 Pivoted support
166 Vertically adjustable
167 Foldable
168 **Pivoted support**
169 Panels or frames

211. SUPPORTS, RACKS—Continued.

Pivoted support

170 Horizontal axis
171 Bar or arm
172 Telescopic,
173 Vertically adjustable,
174 Vertically adjustable.
175 **Adjustable**
176 Vertically.
177 **Knockdown**
178 Foldable or collapsible
179 Toggle.
180 **With screens or curtains.**
181 **Of wire.**
182 **Of pipes or bars and connectors.**
183 **Elements**
184 Adjustable partitions.

212 TRAVERSING HOISTS.

1 **Miscellaneous.**
2 **Weighing.**
3 **Floating.**
4 **Door lifters.**
5 **Track straddling**
6 Self-propelled.
7 **Skidding.**
8 **Vertically swinging hoist frame**
9 Load handling.
10 **Traveling cranes**
11 Load handling,
12 Horizontally swinging bridge,
13 Gantry
14 Load handling,
15 Overhanging end
16 Flexible bridge,
17 Jib,
18 Overhead
19 Flexible bridge,
20 Bridge-mounted hoist motor,
21 Electric
22 Multiple track,
23 Stationary motor
24 Cable driven
25 Fluid,
26 Traveling motor, fluid hoist,
27 Traveling motor, cable shift.
28 **Rotary cranes**
29 Combined crane and supporting rack,
30 Fluid
31 Swinging hoist motor, cable hoist,
32 Swinging hoist motor, trolley mounted,
33 Vertically movable jib
34 Mast jack,
35 Vertically swinging jib

212. TRAVERSING HOISTS—Continued.

Rotary cranes

36 Line-shaft driven,
37 Vehicle-wheel power,
38 Self-propelled,
39 Automatic stop,
40 Load suspension,
41 Load handling
42 Grab
42.5 Guide bar,
43 Portable
44 Grab,
45 Sling,
46 Portable, horizontally pivoted mast,
47 Opposing jibs,
48 Counterbalanced,
49 Portable,
50 Automatic sluing
51 Portable,
52 Variable radius
53 Portable,
54 Variable radius
55 Extensible jib,
56 Trolley,
57 Vertically movable jib,
58 Vertically swinging jib
59 Portable,
60 Lever, first class,
61 Fixed radius
62 Lever, first class,
63 Trolley,
64 Vertically movable jib,
65 Portable,
66 Sluing mechanism
67 Bull wheel,
68 Gear sector,
69 Sluing platform,
70 Pivots, steps and mast caps.

212. TRAVERSING HOISTS—Continued.

71 **Linear**
72 Cable, ship coaling type,
73 Shiftable track
74 Longitudinally movable,
75 Tilting,
76 Cable
77 Load handling
78 Draft rope
79 Dumping
80 Double tackle,
81 Grab,
82 Sling,
83 Load suspension
84 Grab,
85 Sling,
86 Automatic stop,
87 Draft rope, hoist-rope traverse
88 Divided hoist rope,
89 Hook lowering,
90 Running track,
91 Cable return,
92 Gravity return
93 Cable,
94 Draft rope, independent traverse
95 Anchored hoist rope,
96 Hook lowering,
97 Load suspension
98 Hoist, carry and lower,
99 Running rope,
100 Sheave catch
101 Pivoted cable extension,
102 Sheave-frame catch
103 Sliding,
104 Pivoted
105 Double,
106 Rope catch
107 Sliding,
108 Pivoted
109 Double,

212. TRAVERSING HOISTS—Contd.

Linear
Cable
Load suspension
110 Rope grip
111 Variable elevation
112 Carriage release,
113 Side draft,
114 Coacting sheave,
115 Ratchet sheave,
116 Trips, stops, and knockers,
117 Rope carriers
118 Cable-stop operated.
119 Trolley supported,
120 Carrier-sheave operated,
121 Permanently spaced,
122 Carriage holders, track clamp.
123 Pulley changers,
124 Self-propelled
125 Load handling
126 Electric
127 Grab.
128 Guide bar
129 Grab,
130 Ladle,
131 Electric
132 Automatic stop,
133 Hanging-cable traverse,
134 Non-motor traverse
135 Load handling
136 Discharging
137 Automatic,
138 Fluid hoist,
139 Lever hoist,
140 Surface
141 Self-propelled,
142 Drum.

144 **Jibs and masts.**
145 **Auxiliary supports.**

213 RAILWAY DRAFT APPLIANCES.

1 **Miscellaneous.**
2 **Locomotive and tender**
3 Locomotive to tender,
4 Movable to inoperative position
5 With drawbar-lifting means,
6 Pocket type.
7 **Cushioned**
8 Continuous,
9 Combined with car end buffer,
10 Single center sill,
11 Bolster positioned,
12 Radially movable
13 Vertically
14 Combined horizontally,
15 Truck controlled,
16 Hand controlling devices
17 Combined uncoupling levers,
18 Swing head
19 Centering devices,
20 Centering devices
21 Drawbar carriers,
22 Combined spring and friction
23 Preliminary spring
24 Shoes and wedges with casings,
25 Springs only on draft,
26 Differential spring compression
27 Rotating friction elements,
28 Rotating friction elements,
29 Interengaging friction springs
30 Plate springs,
31 Friction casings
32 Shoes and wedges
33 Interleaved friction plates,
34 Compound wedges,
35 Central friction post
36 Shoes and wedges,

213. RAILWAY DRAFT APPLIANCES—Continued.

Cushioned
Combined spring and friction
37 Transversely movable friction element
38 Transverse springs
39 Inwardly movable,
40 Springs
41 Varying resistance,
42 Tension,
43 Fluid,
44 Multiple
45 Tandem arrangement
46 Separate springs for buff and draft,
47 With yokes
48 Opposed overlying plungers,
49 Parallel arrangement,
50 Cooperating parts fixed to car
51 Draft sills
52 Parallel-spring arrangement,
53 Tandem-spring arrangement,
54 Cheek plates
55 Tandem-spring arrangement,
56 Individual-follower stops
57 Combined bolster casting,
58 Striking block
59 Resilient,
60 Combined drawbar carrier,
61 Drawbar carrier,
62 Drawbars
63 Extensions,
64 Connections to cushion
65 Friction casings,
66 Links,
67 Yokes
68 Longitudinally divided,

213. RAILWAY DRAFT APPLIANCES—Continued.

Cushioned
Drawbars
Connections to cushion
Yokes
69 Drawbar connections
70 Hooded
71 Pivotal,
72 Pivotal.
73 **Continuous.**
74 **Radially movable.**
75 **Couplings**
76 Combined car and air train line.
77 Counterpart
78 Link or bar type
79 Selective coupling element
80 Beveled link and swing catch
81 Arrowhead type,
82 Hook and link
83 Bails,
84 Hook and link combined,
85 Headed link and shouldered slot,
86 Pin and link
87 Swing pin,
88 Hook and catch
89 Pivoted hooks
90 Horizontally swinging,
91 Beveled link and swing catch
92 Arrowhead type,
93 Hook and link
94 Bails,
95 Hook and link combined,
96 Headed link and shouldered, slot
97 Rotary head or link,
98 Pin and link
99 Swing pins,

Couplings

Counterpart

100 Interengaging hooks or knuckles
101 Arrowhead type
102 Plural,
103 Transversely sliding bill,
104 Horizontally swinging
105 Miller hooks
106 Movable bill,
107 Star wheel,
108 Plural,
109 Janney type
110 Always in coupling position,
111 Auxiliary and emergency
112 Transition construction and devices,
113 Plural-tailed knuckles,
114 Pinless knuckles,
115 Knuckle openers
116 Springs,
117 Gravity
118 Knuckles,
119 Combined locks
120 Vertically movable and horizontally rotatable,
121 Vertically-movable and tilting,
122 Vertically sliding
123 Pivotally-attached member,
124 Pivoted or rotatable,
125 Lock operated
126 Vertically-sliding locks
127 And rearwardly swinging,

213. RAILWAY DRAFT APPLIANCES—Continued.

Couplings

Counterpart

Interengaging hooks or knuckles
Horizontally swinging
Janney type
Knuckle openers
Lock operated
Vertically-sliding locks
128 Vertically-swinging levers,
129 Vertically-swinging locks,
130 Horizontally-sliding locks,
131 Lock operating
132 Continuing movement
133 Horizontally - rotating shaft,
134 Pivoted levers,
135 Sliding
136 Vertically,
137 Separate movement
138 Rotating and sliding
139 Gravity locks
140 Knuckle attached,
141 Vertically swinging
142 With lock set and anticreep,
143 With lock set,
144 With anticreep,
145 Vertically sliding
146 With lock set and anticreep,
147 With lock set,
148 With anticreep,
149 Horizontally sliding locks,
150 Horizontally swinging locks,

213. RAILWAY DRAFT APPLIANCES—Continued.

Couplings

Counterpart

Interengaging hooks or knuckles
Horizontally swinging
Janney type
151 Contour,
152 Knuckle and head interengagement,
153 Vertical - disengagement prevention,
154 Guard-arm construction,
155 Knuckle and knuckle pins,
156 Knuckle-pin bottom retainers,
157 Detachable ears,
158 Lifter and lock-hole closures,
159 Uncoupling devices
160 Emergency,
161 Selectively movable,
162 Pull rods, chains, or ropes,
163 Interengaging levers
164 Vertically swinging,
165 Vertically swinging,
166 Rotating horizontal shafts
167 Journaled to coupler head,
168 Directly connected to lock,
169 Horizontal link to lock,
170 Vertical link to lock,
171 Brackets,
172 Vertically swinging
173 Vertical hook,
174 Rotating,

213. RAILWAY DRAFT APPLIANCES—Continued.

Couplings

Link or bar type
175 Hook and catch,
176 Beveled link and swing catch
177 Arrowhead type,
178 Hook and link
179 Pivoted hook
180 Multiple,
181 Bails,
182 Headed link and shouldered slot
183 Pivoted head,
184 Rotating head or link,
185 Beveled link and sliding catch,
186 Arrowhead type,
187 Beveled link and fixed catch,
188 Pin and open link
189 Automatic pin moving
190 Swing pin
191 To coupling position,
192 Pin supports
193 Tilting pin,
194 Gravity
195 Combined link lifters and supports
196 Rollers,
197 Pivoted latches
198 Pin attached,
199 Stirrups
200 Spring
201 Combined link lifters and supports,
202 Horizontally sliding
203 Link operated,
204 Pivoted,
205 Link lifters and supports
206 Opposed car,
207 Levers,

213. RAILWAY DRAFT APPLIANCES—Continued.

Couplings
Link or bar type
208 Links
209 End opening,
210 Handled,
211 Uncoupling devices
212 Central control,
213 Operable from car top or side
214 Rotating vertical shaft,
215 Operable from car top only,
216 Rotating vertical shafts,
217 Flexible,
218 Vertically swinging lever,
219 Rotating horizontal shafts.
220 **Car end bumpers or buffers**
221 Resilient
222 Car-platform type,
223 Fluid.
224 **Side-track push rods.**

214 MATERIAL OR ARTICLE HANDLING.

1 **Miscellaneous.**
1.1 **Portable receptacle dumpers.**
2 **Withweighing.**
3 **Pole or tree handlers.**
3.1 **Glass cylinders.**
5 **Hay distributers.**
Piling or arranging apparatus
5.5 Tobacco stringers or unstringers,
6 Article
7 Edge piling,
8 Frame and handler,
8.5 Article unpiling,
9 Stack shapers,
10 Coal-storage type.
11 **Manually controlled selective delivery.**
12 **Marine loading or unloading systems**
13 Ships at sea,
14 Ship and shore.
Charging or discharging apparatus
15 Ship,
16 Storehouse
16.1 Wheeled vehicle,
17 Bin or tank.
18 Furnace type
19 Inclined elevator
20 Bucket orienting,
21 Endless or rotary carrier,
22 Rotary levelers,
23 Reciprocating-bar conveyer
24 Multiple,
25 With endless or rotary carrier,
26 Charge supporting
27 Grab
28 Horizontally swinging,
29 With discharging pusher

214. MATERIAL OR ARTICLE HANDLING—Continued.

Charging or discharging apparatus
Furnace type
Reciprocating-bar conveyer
Charge supporting
With discharging pusher
30 Charge-spreading or furnace-discharging feature,
31 Axially rotatable,
32 Horizontally and vertically swinging,
33 Horizontally swinging,
34 Sectional,
35 Gravity type
36 Bell and hopper
37 Rotary feature.
Roadway vehicle loading or unloading
38 With external cooperating means
39 Rural mail,
40 Railway car and hoist,
41 Vehicle loading
42 Moving vehicle
43 Traveling hopper,
44 Vehicle unloading
45 Vehicle dump and carrier
46 Endless carrier,
46.5 Vertically movable track section,
47 Tilting track section
48 Horizontally swinging,
49 Wagon-dump type,
50 Switch systems,
51 Nonfixed pivot,
52 Side tilt,
53 Shaking or jarring,
54 Vehicle-door-operating feature,

214. MATERIAL OR ARTICLE HANDLING—Continued.

Roadway vehicle loading or unloading
With external cooperating means
Vehicle unloading
Tilting track section
55 Car feeding or holding
56 Second car releasing first,
57 Plows,
58 Moving vehicle
59 Suspended
60 Selective delivery,
61 Tilting,
62 Tilting,
63 Door-closing feature,
64 Tilting vehicle body,
65 Self loading or unloading vehicles
65.2 Brick stack,
65.3 Log,
65.4 Hand trucks, hooking or gripping
65.5 Opposing jaws,
66 Load binders and handlers,
67 Garbage,
75 Elevator,
77 Vertically swinging load support
78 Shovel or fork type
79 Auxiliary rake,
80 Swinging laterally from vehicle,
81 Vehicle actuated,
81.5 Hayrack type, movable car,
82 Ejectors or followers,
83 Conveyer
84 Roller way,
85 Skidway.
86 **Traversing-hoist type**
87 Traveling crane
88 Switch systems.
Combined carriers
89 Hoist and endless or rotary carrier,

214. MATERIAL OR ARTICLE HANDLING—Continued.

Combined carriers

90 Vertically swinging shovel and auxiliary carrier,
91 Vertically swinging load support and endless or rotary carrier,
92 Vertically swinging load support and hoist or drag line,
93 Endless or rotary carrier and drag-line scoop,
94 Skidway with hoisting rope.
95 **Elevator or hoist type**
96 Mail,
97 Store-goods lifters,
98 Wagon-box-lifter type,
99 Load lowering, automatic return,
100 Inclined
101 Ditching type
102 Pivoted track.
103 Tilting carrier
104 Tilting track section,
105 Running out from base
106 Return, buffer, or counter-weight feature,
107 Return, buffer, or counter-weight feature,
108 Skeleton or fork,
109 Outhaul feature,
110 Carrier running out from base,
111 Horizontally swinging
112 Skeleton or fork type
113 Skeleton or fork type,
114 Magnet and grab,
115 Grab,
116 Bucket
117 Valved
118 Chute movable into shaft,
119 Guided
120 Tilting,

214. MATERIAL OR ARTICLE HANDLING—Continued.

Elevator or hoist type

121 Tilting platform
122 Car handling
123 Side tilt,
124 Sectional,
125 Carrier-operated feeding mechanism
126 Car,
127 Return, buffer, or counterweight feature,
128 Automatic stop,
129 Chute movable into shaft.
130 **Vertically swinging load support**
131 Shovel or fork type
132 Horizontally swinging
133 Vertically adjustable
134 Trolley supported pivoted handle,
135 Reciprocating handle
136 Link supported,
137 Tilting,
138 Handle pivoted to boom,
139 Guided,
140 Tilting,
141 Extensible support,
142 Return, buffer, or counterweight feature
143 Spring,
144 Hay retainers,
145 Shovel and handle structure
146 Dumping mechanism,
147 Grab,
148 Nonfixed pivot,
149 Tilting carrier.
151 **Horizontally swinging load support.**
152 **Processes.**

215 BOTTLES AND JARS.

1 **Miscellaneous.**
2 **Bottom filled.**
3 **Ejecting**
4 Siphon type
5 Spring controlled.
6 **Compartment.**
7 **Indicating**
8 Internal,
9 Poison.
10 **Nesting.**
11 **Nursing bottles.**
12 **Spaced wall or jacket**
13 Heat-insulating type.
14 **Nonrefillable**
15 Air trap,
16 Ejecting,
17 Guard or valve type
18 Valves
19 Single type spring controlled,
20 Single type float controlled,
21 Single type gravity controlled,
22 Separate disconnected weight,
23 Pendant weight,
24 Pivoted,
25 Multiple type,
26 Guards
27 Integral with the container,
28 Cap,
29 Fasteners,
30 Separate neck.
31 **Necks**
32 Breakable
33 Stoppers
34 Multiple,
35 Stopper fasteners
36 Spring.

215. BOTTLES AND JARS—Continued.

37 **Closures**
38 Cap
39 Crimped,
40 Packing grooves and seats,
41 Elastic,
42 Frangible,
43 Screw
44 Interrupted thread,
45 Contracting,
46 Opening devices,
47 Stopper type
48 Composite,
49 Screw
50 Interrupted thread,
51 Disk,
52 Expanding
53 Cam or lever,
54 Screw,
55 Opening devices.
56 Vent,
59 Internal
60 Ball,
61 Extension
62 Wire,
63 Pivoted
64 Fasteners
65 Cam,
66 Lever and yoke
67 Closure structure
68 Slotted,
69 Closure-clamping lever
70 Screw,
71 Spring
72 Catch,
73 Tube
74 Valve
75 Ball,

215. BOTTLES AND JARS—Continued.

Closures
Tube
Valve
76 Rotary,
77 Screw,
78 Spring,
79 Vent,
80 Liquid or plastic seal,
81 Fruit depressing,
82 Fasteners
83 Cap
84 Tie.
85 Expanding,
86 Clamp
87 Lever,
88 Screw,
89 Spring
90 Clip,
91 Bow,
92 Interrupted threads and inclines
93 Spring,
94 Flexible,
95 Ring
96 Contracting,
97 Screw,
98 Locks,
99 Retainers.
100 Attachments
101 Clip.

216 LABEL PASTING AND PAPER HANGING.

1 Combined machines
2 Label printing and affixing,
3 Envelop sealing and stamping.
4 Paper hanging
5 Coating and affixing apparatus
6 Hand,
7 Affixing apparatus,
8 Surface preparation.
9 Machines
10 Spool labeling,
11 Selective,
12 Multiple labeling
13 Bottle neck and body,
14 Sample card,
15 Sheet
16 Rack-and-pinion feed,
17 Rack-and-pawl feed,
18 Escapement feed,
19 Screw feed,
20 Strip
21 Severing
22 Reciprocating cutter
23 Pusher feed,
24 Four-motion feed,
25 Roller feed
26 Hand,
27 Rotary tooth feed,
28 Perforation feed,
29 Pivoted cutter
30 Scissors type
31 Belt-conveyor feed,
32 Ribbon feed,
33 Tearing,
34 Affixing magazine, moving
35 Pressure pad or plunger,
36 Presser form,
37 Rollers,

216. LABEL PASTING AND PAPER HANGING—Continued.

Machines
Affixing magazines, moving
38 Wipers or brushes,
39 Flexible wrapper,
40 Revolving article,
41 Fluid pressure,
42 Affixing magazine, stationary
43 Adhesive applying or moistening
44 Fixed roller,
45 Moving roller,
46 Fixed reservoir or absorbent.
47 Moving reservoir or absorbent,
48 Endless belt,
49 Spray or steam,
50 Affixing magazine, hand,
51 Storage magazine
52 Label pickers
53 Nippers,
54 Adhesive,
55 Suction,
Article support
56 Table,
57 Conveyer,
58 Runway,
59 Rotary,
60 Roller.
61 Tools.
62 Processes.

217 WOODEN RECEPTACLES.

4 Tanks.
5 Boxes
127 Bottle-mailing cases,
6 Block,
7 Compartment
8 Folding
9 Display,
10 Display,
11 Display,
12 Knockdown
13 Sectional,
Folding
14 Horizontal and vertical pivot,
15 Horizontal pivot,
16 Vertical pivot,
36 Crates
37 Bicycle
38 Folding,
40 Fruit box,
42 Ventilating,
43 Knockdown
44 Cylindrical and bilge,
45 Sectional,
Folding
46 Horizontal and vertical pivot,
47 Horizontal pivot,
48 Vertical pivot,
49 Cylindrical,
51 Wired slats,
52 Cushioned
53 Padded,
54 Spring
55 Spiral,
17 Walls,
18 Cells
19 Bottle
20 Cord,
21 Plate,

Boxes
Cells
Bottle
22 Strip
23 Bent
24 Clip
25 Cord
25.5 Block
26 Plate
26.5 Cupped
27 Cushioned
28 Pocket
29 Separable
30 Strip
31 Locking
32 Angular
33 Bent
34 Cushioned
35 Cushioned
56 Closures
57 Hinged
58 Display
59 Sliding
60 Supports
61 Detachable
62 Sliding
63 Display
64 Followers
65 Joints
66 Straps
67 Corrugated
68 Wire
69 Stays
70 Driving
71 Wire
72 **Barrels**
73 Cases
74 Ventilated
75 Compartment

Barrels
76 Closures
77 Braced
78 Expanding
79 Wedge
80 Croze and chamfer
81 Covers
82 Compartment
83 Hinged
84 Sliding
85 Wire
87 Gates
89 Fasteners
86 Followers
88 Staves
90 Hoop sockets
91 Hoops
92 Elastic
93 Retainers
94 Tighteners
95 Screw
96 Joints
97 Moisteners
98 Bungs
99 Valved
100 Automatic
101 Safety
102 Controllers
103 Collapsible
104 Flexible diaphragm
105 Liquid seal
106 Locking
107 Bayonet and screw
108 Expanding
109 Gasket
110 Plugs
111 Frangible diaphragm
113 Bushings

Barrels
Bungs
114 Protectors and cancelers
122 **Baskets**
123 Bottoms
124 Closures
125 Handles
1 **Bent**
2 Angular
3 **Linings**
126 **Bucket cars**

218 BUTTON, EYELET, AND RIVET SETTING.

Machines

0.5 Gang
4 Button
5 Riveting
6 Magazine
Eye shank
7 Tack fastener
Staple fastener
8 Staple making and setting
9 Threading and setting
10 Threaded-button feed
11 Threaders
12 Button feeders
13 Tack-fastener feeders
1 Riveting
2 Magazine
2.1 Feeding
3 Staple
14 Eyeleting
14.1 Blind or invisible
15 Magazine
15.1 Feeding
15.2 Duplex
16 Lacing hook
17 Magazine
17.1 Feeding
17.11 Washer-strip type
17.12 Duplex
18 Button carding
17.2 Gauges

Implements

20 Button
21 Riveting
22 Pliers
23 Tack fastener
24 Staple fastener
19 Riveting

218. BUTTON, EYELET, AND RIVET SETTING—Continued.

Implements

25 Eyeleting
26 Lacing hook
27 Button detaching
28 Packages
29 Methods and joints

219 ELECTRIC HEATING.

1 **Metal heating and working**
2 Riveting
3 Shaping
4 Welding
5 Rings
6 Tubes
7 Arc system
8 Work in circuit
9 Liquid electrode
10 Processes
11 **Metal heating**
12 Soldering
13 Transformer system
14 Arc system
15 Work in circuit
16 Liquid electrode
17 Work holders
18 Cooled
19 **Heaters**
20 Systems
21 Tools and instruments
22 Heaters
23 Tool controlled
24 Hair curlers
25 Sadirons
26 Soldering
27 Solder feeding
28 Indirectly heated
29 Burning
30 Branding stamps
31 Cauters
32 Igniters
33 Oil well
38 Fluid
39 Forced circulation
40 Fluid in circuit
41 Immersion
42 Heating fans

219. ELECTRIC HEATING—Continued.

Heaters
43 Vessels and stands
44 Vessels
45 Incandescent lamp
46 Flexible
47 Inductional
34 Radiators
35 Ovens
36 Tubular
37 Radiating plate

220 METALLIC RECEPTACLES.

1 Miscellaneous
1.5 Freight containers
2 Coal receptacles
3 High-pressure-gas holders
3.1 Thermal material
3.2 Outlet or junction box type
3.3 Wall, floor, or panel mounted
3.4 Concrete, lath or plaster engaging means
3.5 In opening
3.6 Opposed engaging means
3.7 With adjustable parts
3.8 With closure
3.9 With support
3.92 Sectional receptacle
3.94 Sectional receptacle
4 Sectional
5 Barrel or tank type
6 Folding
7 Fastening members
8 Telescoping
9 Spaced wall or jacket
10 Metal jacket
11 Paper or wood jacket
12 Skeleton jacket
13 Water jacket
14 Attachments
15 Spacing devices
16 Compartment
17 Removable inner receptacles
18 Wall or ground supported
19 Wire
20 Compartment
20.5 Intercommunicable
21 Cell
22 Partitions
23 Receptacle in cover
23.2 Horizontally attached receptacle sets
23.4 Detachable
23.6 With stacking feature
23.8 Integral

220. METALLIC RECEPTACLES—Con.

24 Closures
24.2 Face plate type
24.3 With closure for face plate opening
24.5 Expansible plug
25 External and internal bar or closure
26 Float
27 Frangible and/or knockout type
29 Multiple
30 Pivoted
30.5 Closure axially rotary
30.6 Spring form or spring biased pivot
31 Modified closure or receptacle
32 Single-plane swing
33 Angular pivot
34 Multiple pivot
35 Spring
36 Opening devices
37 Multiple-plane swing
38 Sliding
38.5 With single cord, strand or rigid wire retaining means
39 Screw
40 Bayonet
41 Sliding
42 Slip type
43 Opening devices
44 Vent
45 Seals, liquid
46 Packing
47 Opening devices
48 Cutting
49 Wire
50 Seam
51 Puncturing and closing
52 Key
53 Ripping
54 Integral strip
55 Fastening devices
56 Bail or handle
57 Bar
58 Bail ear
59 Integral

220. METALLIC RECEPTACLES—Con.

Closures
Fastening devices
Integral
60 Snapping
61 Ring
62 Blanks
63 Linings
64 Coated
65 Paper or wood
66 End structures
67 Body and end seam or joint
68 Double walled
69 Supports
70 Integral
71 Body reenforcing
72 Integral
73 Edge reenforcing
74 Integral
75 Seams or joints
76 Interfitting parts
77 Three to five walls
78 Six or more walls
79 Rolled
80 Separate strip
81 Packing
82 Transparent wall
82.5 Percolator top type
83 Wall structure
84 Skeleton frame
85 Attachments
86 Filling devices
87 Disinfectant devices
88 Fire preventing
89 Frangible or fusible
90 Scrapers
91 Bail ears
92 Wire
93 Followers
94 Handles
95 Wire
96 Holders
97 Stacking devices
98 Garbage-handling devices

221 NO CLASS

222 DISPENSING.

1 **Processes of dispensing**
2 **Check control**
3 **Gas or vapor dispensing**
4 With non-gaseous material dispensing
5 With cutter or punch
6 Parallel connected, serially used
7 Tire inflaters
8 Back pressure cut-off
9 **Article dispensing**
10 With orienting
11 Suction carrier
12 Gripping
13 Impaling
14 **Cut-off operated by selectively pre-set volume or rate of flow responsive mechanism**
15 With means to prevent change of setting during discharge
16 Operating cycle including reset to starting position
17 Moving cut-off operating element with variable initial position
18 Having plural revolutions
19 Plural dials
20 Cut-off by valve closing
21 Cut-off by single trapped volume
22 Cut-off set after discharge begins
23 **With recorder, register, indicator, signal or exhibitor**
24 Register with shutter
25 Plural
26 Two or more volume devices
27 Register and signal
28 With common operating means
29 Plural scale
30 Recorder
31 With motion ratio adjusting means, and/or relatively adjustable scale and pointer
32 With zero-setting mechanism
33 Operating cycle including reset to zero

222. DISPENSING—Continued.

With recorder, register, indicator, signal or exhibitor
With zero-setting mechanism
34 With means to prevent zero-setting during discharge
35 With means to prevent discharge prior to zero-setting
36 Totalizer for successive dispenser cycles
37 Varying cycles or quantities per cycle
38 Reciprocating (including oscillating) dispenser part
39 Audible
40 Flow and/or overflow type
41 Position or extent of motion indicator
42 Selection from plural outlets, valves or traps
43 Comprising an adjustable stop or stops
44 Scale and pointer, with detents
45 Flexibly connected indicator and dispenser element
46 Common screw means for indicator element and dispenser part
47 Indicating element rigidly carried by movable dispenser element
48 Pivoted or rotary dispensing part
49 Slidable indicator element projecting from container
50 Scale on container
51 Float level indicators
52 **Automatic control**
53 Involving conveying conduit jacket and/or inert atmosphere (including vacuum) providing means
54 Temperature responsive or soluble controller
55 Constant weight, volume or pressure control by output
56 Delivery from source controlled by quantity in discharging-receiver
57 By weight, volume or pressure of a second dispensed material
58 By the weight of the material in the supply container

222. DISPENSING—Continued.

Automatic control
59 Cut-off operated by rate of flow responsive mechanism
60 Single complete revolution of controller element
61 Of dispensers with fluid pressure discharge assistant
62 Float controlled pressure liquid
63 Motor control
64 Material level control
65 Full and/or empty interlock
66 Empty container cut-off
67 Float operated flow controllers
68 Plural
69 For vent only
70 **With timing mechanism**
71 **Volume or rate of flow metering**
72 With meter by-pass, gas separation, anti-syphon priming
73 With hose pressure relief or maintenance
74 **Hose or other discharge guide interlocks and interconnections**
75 Switch or motor control and discharge controller actuator
76 **Electrical controls (systems)**
77 **Weighing**
78 **Simulations**
79 Firearm
80 **With cutter and/or punch**
81 To form dispensing opening in container or gas pressure discharge assistant reservoir
82 With non-gravity discharge assistant (e. g., gas pressure)
83 Mounted for relative motion
84 Mounted on receiving receptacle
85 For cutting plural openings
86 With sleeve or rest for container cut
87 With container destroying means
88 With sleeve or rest for container cut

222. DISPENSING—Continued.

With cutter and/or punch
To form dispensing opening in container or gas pressure discharge assistant reservoir
89 With non-friction fit means to secure discharge guide to container
90 Abutment for container interior
91 Screw
92 **Collapsible wall type container**
93 With additional article holding means
94 Plural container and/or compartment
95 With wall collapsing means
96 With interconnected flow controller or closure operating means
97 Plural types
98 Winding and roller types
99 Winding type
100 With casing or support
101 Roller type
102 Plural roller
103 Clamping type
104 Twisting type
105 With casing or support
106 Combined
107 Non-metallic
108 **Drip, leakage or waste catching or disposal**
109 Return to main supply
110 Valved
111 With enclosing cover
112 **Inverted container support and drainage receiver**
113 **With illuminator or burner**
114 **With receptacle or funnel requiring separation for use**
115 Closure type
116 Funnel
117 **Dispenser with receiver or receiver coacting means**
118 Material return from receiver
119 Receiver inlet cleaner
120 With opener for receiver closure
121 With discharge coupling
122 With supply container

222. DISPENSING—Continued.

Dispenser with receiver or receiver coacting means
With discharge coupling
With supply container
123 Pressure or friction type coupling
124 Non-gravity discharge assistant and coupling
125 Valve actuator and coupling
126 Applicator receiving or directing means
127 Applicator operated discharge controller, or discharge assistant
128 **Refilling by operation of means causing or controlling dispensing**
129 **Plural sources, compartments, containers and/or with spaced jacket**
130 At least one non-dispensing
131 Jacketed
132 Three or more diverse sources
133 Measured discharge from one and indeterminate flow from another
134 Interconnected discharge volume varying means
135 With non-gravity discharge assistant or movable trap chamber for each source
136 Single, operable on material from all sources
137 Unitary reciprocating
138 Two or more rotary or swinging
139 Coaxial
140 Vertical axis
141 Single plane
142 Parallel axes
143 Packing or stacking arrangements
144 Rotatably mounted assembly
145 With common discharge
146 **With heating or cooling means**
147 **With refill preventing means**
148 **With cleaning means**
149 Element extending through dispenser outlet
150 Operated by resilient container walls
151 Extending inwardly through container outlet
152 **With conveying conduit jacket and/or inert atmosphere (including vacuum) providing means**

222. DISPENSING—Continued.

153 **With lock or fastening seal**
154 **Inspection devices**
155 External gauge tubes
156 Sight openings
157 Graduated for level determination
158 Graduated transparent container or trap
159 Transparent flow line section
160 **Movably mounted supply container**
161 Vibratory (i. e., for agitation of container contents)
162 Moving relatively to trap, impeller or valve to cause discharge
163 Adjustable relatively to discharge assistant to vary the discharge volume
164 Tiltable
165 For refilling or changing cartridges or containers
166 For gravity discharge
167 Rotatable
168 Vertical axis
169 Peripheral discharge
170 With trap chambers
171 With sleeve type discharge controller
172 With annular outlet
173 **With casing or support**
174 Pole or extension
175 Body carried and/or operated type
176 Ambulant
177 Ground wheel operated dispensing means
178 With motor
179 With pedal controlled discharge means
180 Bracket or suspension supported
181 For bottom discharge
182 Enclosing cover for actuating parts of discharging means
183 Jacketed
184 Extended sidewall base
185 For bottom discharge
186 Foot piece or rest
187 **With wick or absorbent material feed**
188 **With fluid-trap-seal for inlets or outlets (e. g., vents)**

222. DISPENSING—Continued.

189 **With strainer, filter, sifter, flame arrester or foraminous guard**
190 **With material treatment or conditioning means**
191 **With tool or implement handle**
192 **Combined**
193 **Fluid flow discharge**
194 From movable or conveyer type trap chamber
195 **With gas agitation**
196 **Jarring and/or vibrating**
197 Movable or conveyer type trap chamber
198 Single outlet bounded by plural vibrating members
199 Bottom-forming member reciprocable (including oscillatable)
200 Member reciprocable (including oscillatable) transversely of material flow
201 Discharge rotor is actuator for vibratable wall
202 Supply container wall flexing
203 Flexible wall
204 **Siphon combined with non-gravity discharge assistant**
205 **Non-gravity feed to trap of vacuum, gravity, or manual removal type**
206 **Resilient wall**
207 Supply container delivering to receiving chamber
208 Removable for discharge
209 Fluid pressure generating pump or pulsator and/or removable flexible wall closures
210 With container handle or handgrip
211 Internally extending outlet pipe
212 With flow controllers or closures
213 Resilient wall actuated
214 Wall deflecting means
215 Non-metallic
216 **Agitator and/or ejector operating on material in either (1) conveyer type discharge assistants having trap chambers or transverse grooves or (2) movable trap chambers**
217 Mounted on or in conveyer or movable trap chamber
218 Radially movable ejector in rotary conveyer or trap chamber
219 Double ended ejector

222. DISPENSING—Continued.

Agitator and/or ejector operating on material in either (1) conveyer type discharge assistants having trap chambers or transverse grooves or (2) movable trap chambers
220 Meshing conveyer trap or groove and ejector rotor
221 Cam operated agitator or ejector
222 Pivoted ejector
223 With pivoted striker
224 Ball or roller form agitator or ejector
225 Resilient ejector
226 **Agitator followed by another discharge assistant, movable trap chamber and/or interconnected discharge controller**
227 Three or more in series
228 Flexible or pivoted agitator carried by assistant or controller movable about an axis
229 Axially aligned, with axially rotary and longitudinal movement
230 Biasing means constitutes agitator
231 Free engagement type connection
232 Connection through eccentric carried by rotary assistant or controller
233 One rotary and one reciprocating (including oscillating)
234 Reciprocating, non-pivoted
235 Rotary agitator
236 All rotary
237 Relatively rotatable rings and/or plates
238 Parallel axes
239 Coaxial
240 Helix or vane agitator and terminal element
241 Agitator and terminal screw, helix, or vane
242 Agitator rigidly mounted on succeeding device
243 All reciprocating (including oscillating)
244 Relatively movable in parallel planes, non-pivoted
245 Pivoted and non-pivoted reciprocating elements
246 Reciprocable axially of outlet
247 Pivoted only
248 Unitary

222. DISPENSING—Continued.

249 **Floating piston with plural or alternate discharge**
250 With discharge volume varying means
251 **With non-gravity discharge assistant or movable trap chamber**
252 Plural
253 With material operated differential piston
254 Three or more in series
255 Pumps only
256 Follower combined with casing enclosed impeller
257 Interconnected with movable nozzle
258 Utilizing fluid pressure and/or motor
259 Follower and impeller coaxial or parallel and interconnected
260 Follower and impeller coaxial or parallel and interconnected
261 Utilizing fluid pressure and/or motor
262 Utilizing fluid pressure and/or motor
263 Utilizing fluid pressure and/or motor
264 Rotors with concentrically arranged sets of axial trap chambers
265 In sets
266 With selecting means
267 With common discharge volume varying means
268 Variable capacity rotors
269 Container wall sections carrying set units
270 With interior material discharge guides between units
271 Rotary
272 Oppositely directed
273 Coaxial only
274 Spaced units
275 Reciprocating (including oscillating)
276 Unitary
277 Pivoted
278 Alternatively usable
279 Movable or removable baffles or covers for non-used assistant
280 Single outlet formed by plural discharge assistants
281 Parallel rolls

222. DISPENSING—Continued.

With non-gravity discharge assistant or movable trap chamber

282 With discharge volume varying means
283 Plural
284 Trap chambers in series
285 Source and assistant or trap chamber relatively adjustable axially of source outlet
286 Sleeve-type discharge controller for outlet
287 Adjustment in relatively movable actuator
288 Interchangeable, removable or selectively usable discharge assistant trap chamber or element thereof
289 Reversible
290 Adjustable deflector for conveyor type discharge assistant
291 Retractable projections
292 Interconnected radially movable adjusting means for plural rotor projections or traps
293 Rotor having plural adjustable parts of rotor form
294 Substantially coextensive disks and/or rings, axially rotary adjustment
295 Axially adjustable
296 Disk with axially projecting pins
297 Cup rotor with horizontal axis
298 Groove or trap rotor slidable through discharge channel
299 With channel blocking means
300 With non-rotary sleeve
301 Rose washer bearing
302 Material passage parallel to axis of rotation
303 Groove or trap blocking means
304 Axial pocket trap
305 Movable or conveyer type trap chamber with capacity varying means
306 Single inlet-outlet, adjustable bottom
307 Wall with straight line movements
308 Screw adjusting means
309 Adjustable stroke pump piston, pulsator or follower

222. DISPENSING—Continued.

With non-gravity discharge assistant or movable trap chamber

With discharge volume varying means
310 With discharge controller
311 Rotor with discharge controller
312 Discharge passage between drum type rotor and controller
313 Biased controller
314 Reciprocating non-pivoted controller
315 Cup rotor with horizontal axis
316 Sectional discharge controller
317 On container side of rotor
318 With-by-pass or return to supply
319 Displacement type
320 With movable nozzle interconnected therewith
321 With material supply container and discharge assistant casing
322 Movable element actuator projecting through outlet
323 With container handle or handgrip
324 With material supply container and discharge assistant casing
325 Insertable cartridge or removable container
326 With follower
327 Part of cartridge or removable container
328 With material discharge guide on container side of discharge assistant or movable trap chamber
329 Removable or movable depending cups for rotors
330 With plural material outlets
331 Of different types
332 With vent passage for movable trap chamber
333 Motor operated
334 Fluid motor
335 Actuated by pressure of or suction on material to be dispensed
336 With biasing means for discharge assistant and/or its casing
337 Joint sealing bias only
338 Movable encasing wall
339 For oscillating discharge assistant

222. DISPENSING—Continued.

With non-gravity discharge assistant or movable trap chamber

With biasing means for discharge assistant and/or its casing
340 For reciprocating piston or follower type impeller
341 Biasing means within material chamber or passage
342 With scraper or wiper for or carried by discharge assistant
343 With retractable projections
344 Movable or conveyer type trap chamber
345 With striking or clearing means
346 Not part of the supply container outlet
347 Plural and/or interconnected with gate at point of trap re-entry to supply
348 Sectional
349 Yielding
350 Pivoted
351 Reciprocating
352 Brush
353 Barometric or angle of repose
354 With relatively movable cut-off carried by trap chamber
355 With cut-off interconnected with trap chamber for operation
356 Dipping trap chamber, non-rotary, non-endless belt
357 Compound movement
358 Oscillating
359 With relatively movable actuator
360 Intermittent rotary
361 Reciprocating (including oscillating) conveyer type trap chamber
362 Oscillating
363 Single inlet-outlet
364 Pivot lying in chamber rim
365 Plural concentric enlargements on stem
366 Single inlet-outlet

222. DISPENSING—Continued.

With non-gravity discharge assistant or movable trap chamber

Movable or conveyor type trap chamber

367 Rotary conveyor type trap chamber
368 Single inlet-outlet
369 Scoop type
370 Axial inlet and outlet
371 Endless belt carried
372 With material supply container and discharge assistant with casing (e. g., supply container and pump)
373 Fluid pressure discharge
374 Casing removable for discharge
375 With anti-leak or anti-siphon means or full stroke mechanism
376 With plural point inlet to casing
377 Inlet trap
378 Aligned discharge assistant, actuator, container and nozzle
379 Telescopic outlet and/or discharge assistant casing inlet
380 Valved outlet
381 Movable discharge assistant casing
382 Internally extending outlet pipe
383 Container mounted pump or pulsator
384 With piston holding means
385 Pump or pulsator casing within supply container
386 Container with follower
387 Valved outlet, movable discharge guide and/or gas vent
388 With side-wall filling opening
389 Fluid pressure actuated
390 Screw actuated
391 Intermittent grip type actuator
392 Ribbon type follower and/or strand actuator
393 Scoop type
394 Fluid pressure
395 Liquid pressure
396 With pressure limiting means
397 With pressure fluid relieving means

222. DISPENSING—Continued.

With non-gravity discharge assistant or movable trap chamber

Fluid pressure

398 Telescopic container and/or outlet
399 With gas pressure supplying reservoir
400 Valved outlet
401 Container mounted fluid pressure generating pump or pulsator
402 With piston holding means
403 Film accumulating type
404 Compound motions
405 Discharge of material from top of supply
406 Deformable discharging elements
407 Biased
408 Conveyer type with deflector
409 Reciprocating (including oscillating)
410 Rotary
411 Central discharge
412 Helically arranged projections (e. g., screws)
413 Screw with terminal outlet only
414 Peripheral surface material contact
415 Endless belt
416 **Siphon**
417 **Removable from supply container for discharge**
418 Scoop or drawer type
419 Sampler tube type
420 **Drop formers**
421 Grooved closure and/or container neck or outlet
422 With valve
423 **With film accumulating material removers**
424 **With material return to supply**
425 **With trap chamber cut-offs**
426 Plural traps, non-serial
427 Single rotary cut-off member
428 Interconnected discharge controllers
429 For simultaneous discharge
430 Of different capacities
431 With plural discharge
432 Plural level discharge volume varying
433 Independent discharge controllers

222. DISPENSING—Continued.

With trap chamber cut-offs

434 With discharge volume varying means
435 With means to prevent adjustment during discharge
436 Trap chambers in series
437 Barometric or angle of repose
438 With means to change trap chamber volume
439 Movable cut-off or cut-off seat carrying elements
440 Having straight-line motion
441 With container handle or handgrip
442 With vent passage for trap
443 With by-pass or free flow adjustment
444 Single inflow-outflow trap passage
445 Nonr-igidly interconnected cut-offs
446 Free engaging element carried by one cut-off
447 Both reciprocating, non-pivoted
448 With relatively movable actuator
449 With biasing means
450 For both inlet and outlet
451 Rigidly interconnected or unitary cut-offs
452 Rotary and/or pivoted only
453 Axially slidable only
454 **With tiltable container trap only**
455 Supplementary trap
456 Single discharge passage forming trap
457 **Barometric or angle of repose trap chamber**
458 **Supply containers with traps**
459 **Stationary agitator**
460 **Funnel type outlet**
461 Movably interconnected
462 Integral
463 **Rockable or weighted**
464 **Internally extending outlet pipe**
465 **With container handle or handgrips**
466 Auxiliary tilting handle
467 Detachable
468 Vent in handle
469 Movable handle interconnected with flow controller or closure

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222. DISPENSING—Continued.

With container handle or handgrips

470 Handle and actuator for flow controller or closure juxtaposed for one-handed manipulation

471 Non-pivoted actuator reciprocable lengthwise of handle

472 Pivoted actuator

473 On handle

474 Generally lengthwise of handle

475 Handle as spout, spout holder or guard

476 **Spaced, alternately seated flow controllers or closures for single outlet**

477 **Retarded or delayed action flow controllers or closures**

478 **With plural openings or discharge guides**

479 Coterminous (barometric)

480 Hand manipulable shaker, diverte type openings (e. g., dredge top)

481 Having flow controllers or closures

482 Plural and/or single for plural openings

483 Interlocked controllers and/or closures

484 Interconnected for operation and/or integral

485 For plural dispensing outlets

486 Variable number exposed and/or variably opened

487 Non-rigidly interconnected

488 For single passage into which plural passages merge

489 Screw type flow controller or closure

490 **Slitted resilient diaphragm or nipple**

491 **Outlet element operated by pressure of contents**

492 Axially slidable tube, sleeve, or apertured cap

493 Axial discharge

494 Spring form, resilient or compressible flow controller or closure

495 Reciprocable, non-pivoted

496 With biasing means

497 With additional means to hold against motion

498 **Snap acting outlet element**

499 Axially movable tube, sleeve, or apertured cap

500 **Gravity of inertia operated movable outlet elements**

501 **Movable outlet element actuator projecting through discharge guide**

222. DISPENSING—Continued.

502 **Sectional flow controller or closure**

503 Interconnected for relative motion

504 **Motor operated outlet element**

505 **With relatively movable actuator for outlet element**

506 Plural flow controllers or closures

507 Annular, outlet surrounding actuator

508 For swingable elements in receptacle interior

509 For non-rotary outlet element reciprocable axially of discharge opening

510 **Outlet element in one wall, rod actuator through container interior and another wall**

511 **With resilient biasing means for outlet element**

512 Joint sealing bias only

513 Form ovable tubes, sleeves, or apertured caps

514 Axially slidable only

515 For elements having plural, diverse motions

516 For rotary elements

517 For pivoted and swingable elements

518 For elements reciprocable axially of discharge opening

519 **Axially rotary and longitudinally movable tubes, sleeves, or apertured caps**

520 Axial discharge

521 Axial stationary closure plug

522 **Axially slidable tubes, sleeves, or apertured caps**

523 Sectional, telescoping

524 With telescopic guide pin

525 Axial discharge

526 **Movable material discharge guide**

527 Foldable, bendable, collapsible or flexible

528 Closure type

529 With flow controller or closure

530 Non-use securing means

531 Closure type

532 With additional flow controller, closure or seal

533 Swingable

534 Into container recess

535 From container interior

536 With flow controller or closure

537 With flow controller or closure

538 **Non-use housing or securing means for discharge guides**

222. DISPENSING—Continued.

Non-use housing or securing means for discharge guides

539 Reversible to extend into or out of container

540 **Outlet seated in container recess**

541 **With frangible element for outlet**

542 **With packing type seal for outlet**

543 **With single strand, cord or wire connector for removable outlet elements**

544 **With flow controller or closure**

545 Plural and/or carried by separably attached element

546 Cap carried axial plug

547 With interior material guide

548 Rotary, axially

549 With axial longitudinal motion

550 And additional pivotal motion

551 Non-apertured screw cap

552 Screw plug or disc

553 Apertured sleeve or cap, non-axial discharge

554 Plug

555 Between fixed plates or flanges

556 Pivoted

557 Pivot axis parallel to axis of outlet opening

558 Ball type

559 Reciprocatory

560 Arcuate path

561 Between fixed plates or flanges

562 Cap

563 Plug

564 **With interior material guide**

565 **Sifter, sprinkler or plural opening patterns**

566 **Nozzles, spouts and pouring devices**

567 With separable attaching means

568 Screw

569 Abutment for container interior

570 Rim mounted, interengaging groove and bead or flange

571 Anti-drip

572 Integral with container walls

573 Reinforced or with container connected brace

574 With folded seam

575 **Miscellaneous (e. g., outlet shapes)**

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223. APPAREL APPARATUS

1 **Miscellaneous**
2 **Collar, cuff, and bosom making**
3 Pasting, folding, and drying
4 Reinforcing
5 Packaging
6 **Hoop skirt making**
7 **Hat making**
8 Wire frame forming
9 Felting
10 Sizing and dipping
11 Pinning and clearing
12 Shaping
13 Fluid pressure
14 Brim curling
15 Stretching
16 Brim trimmers
17 Brim wirers
18 Napping
19 Clipping or shaving
20 Pouncing and polishing
21 Ironing
22 Banding, binding, and lining
23 Cleaning
24 Blocks and forms
25 Adjustable
26 Heated
27 **Garment stiffener making**
28 **Plaiting, fluting, and shirring**
29 With cross creasing
30 Reciprocating blade
31 Slotted bed
32 Intermeshing teeth

Plaiting, fluting, and shirring
33 Boards
34 Fold guides
35 Implements
36 Hand irons
37 **Folding**
38 Templet and infolding
39 **Turning**
40 Telescopic
41 Abutting
42 Work-gripping rod
43 Fluid turning
44 **Making, working, and attaching trimmings**
45 Fabric spotting
46 Bow or tassel
47 Feather working
48 Bead stringing
49 **Assembling garment supporters**
50 **Tape inserting**
51 **Heating and steaming**
52 **Forming, pressing, molding, and stretching**
52.1 Collar, cuff, or neckband ironers
52.2 Folders and curlers
52.3 Folders
52.4 Curlers
52.5 Edge ironers
52.6 Folded edge
53 Corset
54 Dress shield

Forming, pressing, molding, and stretching
57 Pressing or molding
60 Stocking
61 Stretching
63 Inside trousers frame
65 Inside tie frame
66 Forms
67 Inflatable
68 Dress, coat or skirt
69 Drying and stretching frames
70 With heating or steaming
71 Form retainers
72 Trousers or sleeve
73 Heating or steaming
74 Expansible
75 Stockings
76 With heating or steaming
77 Expansible
78 Glove
79 Heated
80 Expansible
81 Neckwear
82 Tie
83 Form retainers
84 Form retainers
85 **Garment hangers**
86 Insect repelling and perfumed
87 Sheet material
88 Combined type
89 Foldable and telescopic
90 With clamp
91 With clamp

Garment hangers
92 Coat or dress
93 With clamp
94 Foldable or telescopic
95 Skirt or trousers
96 With clamp
97 Fur scarf or muff
98 Covers
99 **Needle threaders**
100 **Darning lasts**
101 **Thimbles**
102 **Needles**
103 Tape
104 Awl
105 **Curtain rod threaders**
106 **Spool and implement holders**
107 Work boxes and baskets
108 Implement holders
109 Needle or pin
110 Work holders and clamps
111 **Putting on or removing garments**
112 Stockings from forms
113 Boot and shoe
114 Bootjacks
115 Folding
116 Movable grip jaw
117 With toe engager
118 Shoehorns
119 Gripping
120 **Supports, bases and stands**

224. PACKAGE AND ARTICLE CARRIERS

0.5 **Miscellaneous**
1 **Weapon**
2 Sheaths and scabbards
3 Hangers
4 **Watch and clock**
5 **Body and belt attached**
5.1 Umbrella or canopy
6 Baby or patient
7 Game
8 Knapsack
9 Convertible
10 Tent
11 Slings with belts
12 Slings
13 Cartridge
14 Garment attached
15 Magazine
16 Longitudinal feed
17 Compartment
18 Revolving
19 Tilting pocket
20 Block cell
21 Individual holders
22 Belt or sling
23 Loop and pocket holders
24 Skeleton
26 Bag, case, or frame
27 Chatelaine
28 Hand or wrist attached
25 Bracket
29 **Vehicle**
29.5 Railway car

Vehicle
30 Bicycle
31 Convertible and combined
32 Receivers
33 Collapsible frame
34 Wrapper
35 Forward-reach supported
36 Handle-bar supported
37 Spring holders
38 Frame
39 Bracket
40 Folding
41 Handle-bar supported
42 Hooks
43 **Saddlebags**
44 Traveling bag
45 **Hand**
46 Convertible and combined
47 Traveling bag
48 Tray
49 Sling
50 Handle and clamping plates
51 Strap tightener
52 Handle, bar, and strap
53 Harness
54 Strap tightener
55 Handle and strap
56 Cord or chain
57 Cord hook
58 Strap loop

225. DISPENSING BEVERAGES

1 **Beer apparatus**
2 Barrel taps
3 Draft tube
4 Driving tools
41 Faucets
43 Bung holding
42 Screw bung
44 Faucet-hole covers and guards
5 Faucets
6 Foam
7 Pump
8 Foam separators
9 Settling chambers
10 Followers
11 Collapsible
12 Pipe cleaners
13 By-pass
14 Hot water
Pressure
15 Air
16 Pump
17 Gas
18 Attached chamber
19 Pump
20 Vents
40 **Cooler type**
21 **Soda-water apparatus**
22 Bottle taps
23 Faucets
24 Foam
25 Rotary valve
26 Mixing
27 Nozzles
28 Fountains
29 Casings
30 Pressure reducers
31 Pump
32 Sirup cocks
34 Rotary

Soda-water apparatus
35 Sirup tanks
36 Removable
37 Sliding
38 Swinging
39 Valves

226. FILLING AND CLOSING PORTABLE RECEPTACLES

1 **With articles and fluent materials**
2 **With articles**
3 Bobbins and cops
4 Match books
5 Cigarettes
6 Toothpicks
7 Matches
8 Filling and closing
9 Separate fill and cover stations
10 Measured charge
11 Filling
12 Measured charge
13 Closing
14 Layers and columns
15 Cans
16 Lowered support or raised wall
17 Facing
18 Inserted form, guide, or support
With fluent materials
19 Special types
20 Gas
20.1 Evacuation and gas filling
20.2 Evacuation processes
20.4 Evacuation apparatus
20.6 Apparatus
21 Immersion
22 Overload
23 Uniform density
24 Receding receptacle support
25 Rotary packer
26 Siphon tube
27 Inverted receptacle
28 Turnover
29 Funnels
30 Fruit jar
31 With supports
32 With indicating means

With fluent materials
Special types
Funnels
33 Air displacement
34 Valved
35 Float-controlled valve
36 Valved
37 Float-controlled valve
38 Body structure
39.6 Battery grid or electrode
40 Capsule
41 Closing feature
42 Conceal
43 Mattress
44 Inserted bat holder
45 Belt conveyer
46 Reciprocating follower
47 Bag
48 Valved bag
49 Flat bag
50 Tube stripping
51 Filling and closing
52 Heading
53 Sewing
54 Tying
55 Filling and agitating
56 Closing
57 Tying
58 Filling
59 Spreading hopper or form

With fluent materials
Special types
Bag
Filling
60 Scoop type
61 Successive bags
62 Siphon bottle
63 Fountain pen
64 Bail-stopper bottle
65 Pull-stopper bottle
65.5 Specially related filling device and receptacle
66 General types
67 With safety screen
68 With means for treatment
69 Of material
70 Heating or cooling
71 Compacting
72 Agitating
73 Filling and closing
74 Rotary closing
75 Separate fill and close stations
76 Closure inserting
77 Single fill and close station
78 Closure inserting
79 Closure feed
80 Closing
81 Special-closure applying
82 Hermetic
82.2 Tipping (i. e., vent soldering)
82.4 Seaming or soldering can heads or caps

With fluent materials
General types
Closing
83 Closure applying and conforming
84 Die
85 Fillers and forcers
86 Sectional
87 Rotary tool
88 Screw-closure applying
88.1 Cap feeding
89 Closure inserting
90 Closure compressing
91 Closure feeding
92 Closure feeding
93 Filling
94 Successive receptacles
95 Positioning conveyer
96 Rotary
97 Feed-controlling-movement
98 Air displacement
99 Feed-controlling movement
100 With plural materials
101 Charge forming
Predetermined bulk
102 Traveling measure
103 Charge ejecting
104 Charge pouring
105 Stationary measure
106 Displacer
107 Charge ejecting
108 Double cut-off

With fluent materials
General types
Filling
109 Air displacement
110 Piston-driven positioning means
111 Pressure-controlled feed valve
112 Force feed
113 Pressure and overflow
114 Overflow check
115 Pressure
116 Vacuum
117 Air-pressure relief valve
118 Supply-float controlled
119 Overflow
120 Feed-cut-off controlling
121 Overflow check
122 Feed cut-off
123 Receptacle-movement controlled
124 Parallel
125 Force feed
126 Feed cut-off
127 Automatic
128 Receptacle-movement controlled
129 **Accessories**

226. FILLING AND CLOSING PORTABLE RECEPTACLES—Continued.
With fluent materials
General types
Filling
Successive receptacles
Positioning conveyer
99 Feed-controlling movement,
100 With plural materials,
101 Charge forming,
Predetermined bulk
102 Traveling measure
103 Charge ejecting,
104 Charge pouring,
105 Stationary measure
106 Displacer,
107 Charge ejecting,
108 Double cut-off,
109 Air displacement
110 Piston-driven positioning means,
111 Pressure-controlled feed valve,
112 Force feed,
113 Pressure and overflow
114 Overflow check,
115 Pressure
116 Vacuum,
117 Air-pressure relief valve
118 Supply-float controlled,
119 Overflow
120 Feed-cut-off controlling,
121 Overflow check,
122 Feed cut-off
123 Receptacle-movement controlled
124 Parallel,
125 Force feed,

226. FILLING AND CLOSING PORTABLE RECEPTACLES—Continued.
With fluent materials
General types
Filling
126 Feed cut-off
127 Automatic,
128 Receptacle-movement controlled.
129 Accessories.

227 FIRE ESCAPES.

1 Miscellaneous.
2 Convertible.
3 Combined escapes
4 Lateral building face traversing,
5 With lazy tongs,
6 With towers,
7 One as body catcher,
8 One as reciprocating carrier,
9 One as endless path carrier.
10 Lateral building face traversing
11 Elevating.
12 With fire protection
13 Fluid distribution
14 Portable extension tower,
15 Ventilation.
16 With signals, alarms or indicators.
17 With furniture.
18 With storage means
19 Receptacles.
20 With projector or projectile.
21 Vertically extensible structures
22 With movable car or cage.
23 Towers.
24 Climbers
25 Gripping
26 Fulcrum and lever type,
27 Penetrating.

227. FIRE ESCAPES—Continued.
28 Endless path carrier.
29 Reciprocating path carrier
30 With moving rope or other strand
31 Car or platform carrier,
32 With stationary strand
33 Car or platform carrier,
34 Plural brakes or governors,
35 Tortuous
36 Adjustable.
37 Chutes
38 With means to control rate of descent,
39 Flexible wall,
40 Entrance or exit devices.
41 Poles, strands or springs.
42 Body catchers
43 With rebound preventer,
44 Multiple,
45 Sheet or net type
46 Frame supported,
47 Post supported.

49 Body harness.

228 LADDERS.

1 Miscellaneous.
2 Convertible
3 Shutter or window guard,
4 Ironing board or wash bench.
5 Wheeled
6 Truck
7 Separable truck sections,
8 Power operated,
9 Hoisting
10 Spring power,
11 Cable and windlass,
12 Gearing
13 Screw,
14 Turntables,

228. LADDERS—Continued.
Wheeled
15 Propped
16 Hand truck.
17 With platforms
17.1 Wall
17.2 Movable platform and ladder,
17.3 Movable ladder
17.4 Pivoted only.
18 Extension
19 Operating mechanisms
19.1 Lazy tongs
19.2 Tongs as ladder,
20 Cable and windlass,
21 Propped
22 Trestle type,
23 Hinged sections
24 Propped,
25 Separable sections
26 Propped.
27 Propped
28 Group,
29 Stepladder type
30 Storage-frame prop,
31 Laterally movable props,
32 Tripod,
33 Spreaders and ties.
34 Single stile
35 Flexible.
36 Collapsible
37 Propped,
38 Slidable rungs or units,
39 Telescopic.
40 Flexible
41.5 Endless,
41 Upwardly extensible,
42 Receptacles,
43 Reels,
44 Jointed units.

228. **LADDERS**—Continued.
45 **Attached**
46 Independent rungs
47 Bracket type,
48 Pivotally,
49 Railway car,
50 Trap-door operated.
51 **Scaling.**
52 **Trolley**
53 Store service.
54 **Ship's-ladder type.**
55 **Tubular.**
56 **Metallic.**
57 **Knockdown.**
58 **Structural details**
59 Reenforcing.
60 **Attachments**
61 Terminals and feet
62 Pads,
63 Extensible,
64 Stands,
65 Stops
66 Hook type,
67 Guards,
68 Hinges.

229 PAPER RECEPTACLES

16 **Folded blank boxes**
24 Buckets
25 Closures
26 Integral cover,
30 Trays
31 Corner folds,
32 Corner flaps
33 Cover extension,
34 Infolding side,
35 Interlocking
36 Cover extension,

229. **PAPER RECEPTACLES**—Con.
Folded blank boxes
37 Tubes
38 Closures, inserted flaps
39 Interlocking,
40 Wrappers,
19 Slide
20 Dispensing,
27 Compartment
28 Cells
29 Wrapper,
17 Dispensing,
23 Multiple
18 Sectors,
22 Triangular,
21 Cylindrical.
6 **Boxes**
8.5 Savings,
9 Slide
10 Compartment,
11 Dispensing,
15 Compartment,
42 Division plates,
7 Dispensing,
8 Ornamental,
14 Lined,
41 Collapsible,
43 Closures
44 Hinged,
45 Fasteners
46 Cord,
47 Metallic,
51 Openers, ripping,
52 Handles,
48 Seams,
49 Stays
50 Cord.
53 **Bags**
54 Satchel,
55 Reenforced,

229. **PAPER RECEPTACLES**—Con.
Bags
56 Compartment,
57 Bottoms
58 Square
59 Corner slits,
60 Diamond fold,
61 Seamless,
62 Closures
62.5 Valve type,
63 Cord,
64 Fluted,
65 Metallic,
66 Opening.
68 **Envelopes**
69 Series,
70 Coupon,
71 Display,
72 Compartment,
73 Return,
74 Tag,
75 Blanks,
76 Closures
77 Fasteners
78 Metallic,
79 Seal,
80 Sealing
81 Perforated,
82 Tongues,
83 Soluble dye,
84 Tongue,
85 Openers
86 Cord.
87 **Wrappers**
87.2 Coin type,
87.5 Pocketed,
88 Bag,
89 Bottle
90 Corrugated,
91 Padded,

229. **PAPER RECEPTACLES**—Con.
Wrappers
92 Mailing sheets,
92.1 Letter sheets
92.3 Display,
Closures
92.5 Fasteners,
92.7 Flap.
92.8 **Postal cards or packets.**
92.9 **Coin cards.**
93 **Tubes, cylindrical.**
67 **Barrels.**
1.5 **Miscellaneous.**
2.5 **Pressed.**
3.1 **Liquid proofed.**
3.5 **Material.**
4.5 **Cylindrical or conical, body or wall structure.**
5.5 **End structure**
5.6 Crimped seam,
5.7 Separate fastener.
5.8 Pressed bottoms and tops.

230 GAS PUMPS AND FANS.

1 **Miscellaneous.**
2 **Regulators.**
3 Explosive motor,
4 Plural controls
5 For throttle valve,
6 For electric motor,
7 For unloading valve,
8 Throttle valve
9 Expansible-chamber operated,
10 Flow operated,
11 Speed control
12 Electric motor,
13 Starting and stopping devices
14 Connectors and disconnectors
15 Clutch,
16 Belt shifter,
17 Electric motor
18 Expansible-chamber operated,
19 By regulating pump
20 Stroke regulators,
21 Clearance control,
22 By pass,
23 Pump-valve control
24 Unloaders
25 Variable capacity,
26 For multistage pumps,
27 Discharge types,
28 Plural,
29 Speed-governor operated,
30 Expansible-chamber operated
31 Pilot valve.
32 **Combined devices**
33 With vehicle
34 Inertia types,
35 With wheel,
36 With running board
37 Wheel actuated,

230. GAS PUMPS AND FANS—Contd.

Combined devices
With vehicle
38 Vehicle-motor actuated
39 Direct crank-shaft extension.
40 **Convertible types.**
41 **Convertible motor and pump.**
42 **Reversible flow.**
43 **Multiple gases.**
44 **Combined types**
45 Series.
46 **Multiple suction and/or discharge**
47 For rotary pumps.
48 **With motor**
49 Fluid transmission,
50 Pulsator motor,
51 Reciprocating motor
52 Direct connected
53 Multiple units,
54 Common piston,
55 Electric motor,
56 Explosive motor,
57 Rotary motor
58 Electric motor,
59 Current motor
60 Wind motor,
61 Tide or wave motor
62 Vane or bucket
63 Oscillating,
64 Rotary,
65 Float
66 Pivoted,
67 Vertically guided,
68 Weight.
69 **Fluid displacement**
70 Momentum liquid piston
71 Hydraulic-ram type,
72 Combustion,
73 Steam and/or vacuum,

230. GAS PUMPS AND FANS—Contd.

Fluid displacement
74 Movable chamber
75 Rotary,
76 Oscillating,
77 Dipping chamber
78 Rotary
79 Liquid ring,
80 Reciprocating bell
81 Double acting,
82 Multiple units,
83 Reciprocating liquid piston
84 Tide or wave type,
85 With piston actuator,
86 With automatic valve actuation
87 Gravity vessel
88 Movable pump chamber,
89 Expansible-chamber operated
90 Float controlled,
91 Float,
92 Jet pumps
93 Combined nozzle types,
94 Tube cleaners,
95 Elastic motive fluid
96 Flue
97 With spark arresters
98 Regulators,
99 Regulators
100 For jets,
101 With generator,
102 With cooler or condenser,
103 Plural jets
104 Successive,
105 Fall tube
106 Tide or wave type,
107 Mercury,
108 With rotary impeller
109 Multiple units,
110 Plural jets,

230. GAS PUMPS AND FANS—Contd.

Fluid displacement
Jet pumps
111 Regulators
112 Nozzle and/or combining tubes,
113 **Rotary**
114 Regulators
115 Surge preventing,
116 With motor
117 Electric motor,
118 Viscosity type,
119 Screw and centrifugal,
120 Screw
121 Multiple impellers
122 Successive,
123 Reversely rotating,
124 Centripetal,
125 Centrifugal
126 Bowl type,
127 Center intake
128 Opposed intakes,
129 Multiple impellers
130 Successive
131 Concentric,
132 Elements
133 Liners, casings and materials,
134 Impellers
135 Flywheel type.
136 **Expansible chamber**
137 Rotary
138 Regulators,
139 With motor,
140 Rotary cylinder,
141 Interengaging impellers
142 Beveled,
143 Helical,
144 Alternating pistons,
145 Planetary pistons
146 Nonrotating
147 Movable abutment,

230. GAS PUMPS AND FANS—Con.

Expansible chamber
Rotary
148 Nutating axis,
149 Movable abutment
150 Rotary.
151 Movable vane
152 Reciprocating
153 Diametrically cooperating,
154 Oscillating
155 Radial pivot,
156 Rotary,
157 Stationary pivot,
158 Multiple units,
159 Oscillating piston,
160 Collapsible chamber
161 Combined devices,
162 With motor,
163 Double acting,
164 Multiple units,
165 Oscillating compress
166 Double acting,
167 Multiple units,
168 Rotary compress,
169 Bulb,
170 Diaphragm
171 Valved,
172 Reciprocating piston
173 Axially rotating,
174 Movable cylinder
175 Oscillating,
176 Rotary
177 Radiating cylinders,
178 Parallel cylinders,
179 Flow controlling,
180 Opposing pistons,
181 Successive pistons
182 With intercooler,
183 Differential,

230. GAS PUMPS AND FANS—Con.

Expansible chamber
Reciprocating piston
184 Multiple cylinders
185 Aligned,
186 Annularly disposed,
187 Radiating,
188 Double acting
189 Multiple cylinders,
190 Valved piston
191 Multiple cylinders
192 Aligned,
193 Annularly disposed,
194 Radiating,
195 Double-acting piston,
196 Hollow piston rod
197 Double-acting piston,
198 Successive pistons
199 Solid piston combined,
200 Aligned cylinders,
201 Concentric cylinders.
202 **Elements**
203 Fluid seal
204 For rotary pumps
205 Expansible-chamber type
206 Lubrication
207 For rotary pumps,
208 Cooling
209 For rotary pumps
210 Expansible-chamber type,
211 Air or gas cooled,
212 Water jacket,
213 Rod and/or piston,
214 Operating devices
215 For rotary pumps,
216 Vehicle actuated,
217 Cams and eccentrics,
218 Direct connected, hand or foot,
219 Spring or weight,
220 Oscillating lever,

230. GAS PUMPS AND FANS—Con.

Elements
221 Valved pistons.
222 Valve actuation
223 Fluid actuated,
224 For oscillating valves,
225 For rotary valves,
226 With modifiers,
227 Valves
228 Check valves
229 Oscillating,
230 Yielding seat,
231 Combined suction and discharge,
232 Sound preventing
233 Insulation,
234 Casings,
235 Supports,
236 Pressure equalizers,
237 Clearance-reduction devices,
238 Cylinders, liners, heads and materials.
239 **Accessories**

Fans
240 Miscellaneous,
241 Combined devices
242 With bed,
243 With chair,
244 With door,
245 With swing,
246 With hub or stub shaft,
247 With flywheel,
248 With sewing machine,
249 With vehicle,
249. 5 With illuminating means.
250 Combined fan types,
251 Compound vane movement,
252 Rotary
253 With body motion
254 Rotating,

230. GAS PUMPS AND FANS—Con.

Fans
Rotary
With body motion
255 Rotating and oscillating
256 Oscillating
257 Double oscillation,
258 With motor
259 Electric motor,
260 Reversely rotating,
261 Screw,
262 Oscillating
263 With motor
264 Electric motor,
265 Fly brush type,
266 Hand disk
267 Reversely rotating,
268 Collapsible
269 Radially,
270 Regulators
271 Starting and stopping devices,
272 Elements
273 Supports,
274 Diffusers,
275 Guards.

231 WHIPS AND WHIP APPARATUS.

1 **Whip machines.**
2 **Whips**
3 Convertible whips and canes,
4 Lashes,
5 Lash and snap fastenings,
6 Caps, buttons, and joints.

232 DEPOSIT AND COLLECTION RECEPTACLES.

1 **Miscellaneous.**
2 **Ballot boxes.**
3 Ball.
4 **Savings boxes**
5 Inspection,
6 Frame fastenings.
7 **Fare boxes**
8 Ticket punching and canceling,
9 Multiple coin slot and runway,
10 Ticket and change.
11 Ticket, car,
12 Receivers,
13 Illumination,
14 Change gates,
Collection devices
15 Safety receptacle
16 Auxiliary.
17 **Letter boxes**
18 Ticket registers and recorders,
19 House
20 Collection and delivery
21 Compartment,
22 Door or window jamb,
23 Inside fastener,
24 Compartment
25 Cooperative closures
26 Distributing guide,
27 Collection and delivery,
28 Pivoted receiver,
29 Auxiliary, cooperating,
30 Collection devices
31 Safety receptacles
32 Auxiliary,
33 Package clips and pockets,
Signals
34 Sight
35 Door controlled,

232. DEPOSIT AND COLLECTION RECEPTACLES—Continued.

Letter boxes
Signals
Sound
36 Door controlled,
Indicators
37 Door operated,
38 Frame construction,
39 With supports.
41 **Milk receptacles**
42 Door or window jamb,
43 Funnel filler.
44 **Closures and chutes**
45 Letter box
46 Name plate,
47 Pivoted trap
48 Double,
49 Pocket
50 Bottomless,
51 Integral door,
52 Turnstile,
53 Discharge,
54 Guard fingers,
55 Coin trap
56 Endless carrier,
57 Pivoted
57.5 Refunding,
58 Cooperating chute closure
59 Multiple trap,
60 Rotatable
61 Turnstile,
62 Gravity reverse checks,
63 Serrated shelves.

233 CENTRIFUGAL-BOWL SEPARATORS.

1 **Miscellaneous.**
2 **With filtering.**
3 **With agitating or conveying**
4 Outside of bowl,
5 Vibratable shell,
6 Rotary and reciprocating stirrer,
7 Rotary stirrer
8 Current actuated,
9 Expansible,
10 Stationary stirrer.
11 **With heat exchange.**
12 **With fluid treatment**
13 Gas,
14 Liquid
15 Opposed flow.
16 **With fluid distribution**
17 Multiple separator
18 Successive,
19 Controlling
20 Bowl valve,
21 Conducting or receiving
22 Movable receiver.
23 **With power transmission**
24 Motor,
25 Planetary movement,
26 Test-tube and bottle holding.
27 **Separators**
28 Receiving, distributing, and discharging
29 Nonradial distributing plate
30 Longitudinal
31 Concentric,
32 Radial distributing plate
33 Longitudinal,

233. CENTRIFUGAL-BOWL SEPARATORS—Continued.
Separators
34 Receiving and distributing
35 Nonradial distributing plate
36 Longitudinal
37 Concentric,
38 Distributing and discharging
39 Nonradial distributing plate,
40 Distributing
41 Nonradial distributing plate
42 Longitudinal
43 Concentric,
44 Radial distributing plate,
45 Receiving,
46 Discharging
47 Exits.

234 RECORDERS.

1 **Miscellaneous.**
2 **Combined recorders and registers**
Fare
3 Individual record,
4 Total record,
5 Speed.
5.4 **Weighing.**
5.8 **Machine efficiency or output.**
5.6 **Vibration.**
9 **Fare**
9.5 Electric.
12 **Passenger**
13 Gate,
14 Seat,
15 Step,
12.5 Electric.
26 **Ship's course**
26.5 Electric.
5.5 **Electric meter.**
33.5 **Telephone.**

234. RECORDERS—Continued.
21 **Steam-engine indicators**
22 Bourdon type,
23 Drum,
24 Engine connections,
25 Indicator cylinder.
27 **Signal**
27.5 Electric.
6 **Combined readings.**
29 **Speed**
Shaft
30 Continuous record
31 Governor controlled,
32 Uniform amplitude,
33 Intermittent record,
29.5 Electric.
Time stamps
Dial
54 Movable dial,
55 Movable platen,
Drum
56 Movable drum,
57 Movable platen,
53.5 Electric.
36 **Time**
Watchmen's
37 Miscellaneous,
Stationary record
38 Time-operated marker,
Time-operated record
39 Multiple key,
40 Single key,
37.5 Electric
37.6 Receivers,
Workmen's
41 Miscellaneous,
42 Check receivers,
Individual card
43 Time impression,

234. RECORDERS—Continued.
Time
Workmen's
Intermittently movable record
Time-printing wheel
44 Autographic
45 Check operated,
Individual record
46 Single impression,
47 Printing key
48 Operating lever,
Time-operated record
49 Autograhpic,
Individual record
50 Single impression
51 Printing key
52 Tag-operated marker,
53 Wage computers,
41.5 Electric,
36.5 Electric.
17 **Pressure**
18 Air brake,
Gauge
19 Disk,
20 Drum.
1.5 **Electric.**
58 **Meter readings.**
59 **Chemical**
60 Photographic
61 Oscillographs.
62 **Thermal.**
63 **Perforating.**
64 Disruptive electric spark.
65 **Plural record**
66 Plural marker,
67 Single marker.
68 **Intermittent record.**
69 **With follow-up.**
70 **Marker**
71 Reciprocating,

234. RECORDERS—Continued.
Marker
72 Pivoted,
73 With inking means.
74 **Record receiver**
75 Disk,
76 Strip
77 Drum.

235 REGISTERS.

1 **Miscellaneous.**
2 **Cash registers and recorders**
3 Check printing.
4 **Cash recorders**
5 Manual.
7 **Cash registers**
6 Departmental,
8 Key set
9 Crank operated,
10 Drawer operated,
11 Motor operated,
12 Key operated
13 Detail adders,
14 Differential mechanism
15 Key coupled,
16 Lost-motion mechanism,
17 Checks
18 Balls,
19 Dial
20 Independent indicator,
21 Lever operated,
22 Drawer-operating mechanism,
23 Indicator mechanism
24 Shutters,
25 Tablet droppers,
26 Key arresters,
27 Key locks,
28 Lid registers.

235. REGISTERS—Continued.

33 **Fare registers**
29 Multiple,
30 Cab-fare indicating,
31 Ticket delivery,
32 Registering boxes,
34 Dial and cylinder,
35 Belt,
36 Parallel axes
37 Cylinder,
38 Dial and hand,
39 Disk,
40 Single axis
41 Concentric disk,
42 Cylinder,
43 Dial and hand,
44 Operating devices
45 Electric,
46 Punch,
47 Resetting
48 Direction indicator,
49 Hundreds indicator.
51 **Voting machines**
50 Recording,
52 Assembly,
53 Check operated,
54 Key set,
55 Key operated,
56 Vote counters.
57 **Registering ballot boxes.**
61 **Calculators**
61.5 Ordnance control data,
61.6 Record controlled
61.7 With data comparing,
61.8 With subtraction,
61.9 With printing,
61.10 With punching,
61.11 Sensing or analyzing mechanism,
61.12 Records.

235. REGISTERS—Continued.

Calculators
58 Recording
59 Key operated,
60 Key set,
62 Motor actuated,
63 Traveling carriage
64 Adding pencils,
65 Bar and disk,
66 Cylinder and disk,
67 Spiral,
68 Ball,
69 Bar
70 Slide rules,
71 Belt,
72 Parallel axes
73 Cylinder,
74 Disk
75 Key operated,
76 Gear,
77 Single axis
78 Concentric disk,
79 Cylinder
80 Keyless
81 Lever operated,
82 Key operated,
83 Disk
84 Slide rules,
85 Tabular
86 Belt,
87 Cylinder,
88 Disk,
89 Sheet.
90 **Game boards.**
102 **Typewriter word counters.**
94 **Liquid registers.**
98 **Package operated.**
100 **Registering boxes.**
99 **Platform operated.**

235. REGISTERS—Continued.

101 **Stamp.**
93 **Gate and turnstile operated.**
95 **Odometers**
96 Details,
97 Trip and total.
103 **Rotation counters**
103.5 Comparing,
104 Timing devices,
105 **Pedometers.**
123 **Ball or button indicator.**
124 **Bar and scale.**
125 **Belt.**
127 **Pivoted indicator.**
106 **Angled axes.**
107 **Spiral.**
108 **Parallel axes**
109 Gear,
110 Cylinder,
111 Dial and disk,
112 Dial and hand,
113 Disk
114 Hand operated.
115 **Single axis**
116 Concentric disk,
117 Cylinder
118 Single cylinder,
119 Differential gears,
Dial and hand
120 Multiple hand,
121 Single hand,
122 Disk.
92 **Electrically operated.**
91 **Operating devices.**
128 **Alarm mechanism.**
129 **Full-stroke mechanism.**
130 **Locking mechanism.**
131 **Overthrow preventers.**
132 **Stop mechanism.**

235. REGISTERS—Continued.

133 **Transfer mechanism**
134 Cam and lever,
135 Deep notch,
136 Differential gears,
137 Independent actuator
138 Successive,
139 Intermediate pinion,
140 Side tooth
141 Lock,
142 Traveling pawl
143 Side action.
144 **Zero-setting devices.**
145 **Keyboards**
146 Auxiliary.

236 AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION.

1 **Miscellaneous.**
2 **Incubator type of heater**
3 Electric,
Thermostatic
4 Expanding fluid,
5 Expanding solid.
6 **Brooder type of heater.**
7 **Sadiron type.**
8 **Atomizer type of burner.**
9 **Combined heater and apartment controlled.**
10 **Hot-air furnace**
11 Air and fire control.
12 **Fluid mixers**
13 Plenum type.
14 **Combined boiler and furnace controlled.**
15 **Furnace controlled.**

236. AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION—Continued.

16 **Combined draft and check control.**

Exchange heaters

17 Pressure operated,

Thermostatic

18 Expanding fluid,

19 Expanding solid.

20 **Closed fluid heaters**

21 Safety cut-out,

22 Radiator type,

Combined thermostat and flow controlled

23 One valve,

24 Two or more valves,

24.5 Flow and pressure controlled,

25 Flow controlled,

26 Pressure operated

27 With balancing pressure chamber.

28 Stroke retarding,

29 Relay, puppet,

30 Bourdon type,

31 Float,

Thermostatic

32 Expanding fluid,

33 Expanding solid.

34 **Cooling radiator**

35 Air control.

36 **Heating radiator**

37 Combined radiator and apartment controlled,

38 Air control,

Exhaust operated

Fluid-operated motor

39 Aspirator,

40 Thermostatic

41 With trap,

236. AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION—Continued.

Heating radiator

Thermostatic

42 Expanding fluid,

43 Expanding solid.

44 **Humidity control.**

45 **Draft operated.**

46 **With timing element.**

47 **High and low temperature alternate.**

48 **Snap acting.**

49 **Ventilators.**

50 **Liquid valve.**

51 **Distance adjusted.**

52 **Float operated.**

Traps

Float valve

53 Thermostatic air valve,

Pressure-operated valve

54 Thermostatic pilot,

Thermostatic

55 With float-controlled pilot,

56 Expanding fluid

57 Bourdon type,

58 Wafer type,

59 Expanding solid,

60 Conduit.

Air-relief valves

Radiator type

Thermostatic

61 With pressure control,

62 With separate float,

63 Expanding float,

64 Expanding fluid

65 Float operated,

66 Expanding solid.

67 **Motors**

Relay

68 Auxiliary heater,

236. AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION—Continued.

Motors

Relay

69 Pyrometer galvanometer

70 With heating element,

71 Balanced

72 Thermostatic relay,

73 Continuous drive,

74 Electric

75 Reciprocating or oscillating,

76 Step by step,

77 Vibrating arm,

78 Relay,

Fluid operated

79 Relay

80 Shunt,

81 Snap acting,

82 Compound

83 Snap acting,

84 Electric,

85 Pressure operated,

Thermostatic

86 Expanding fluid,

87 Expanding solid,

88 Magnetic release

89 Safety cut-out,

90 Thermal release.

Thermostatic

91 Hot and cold,

92 With pressure control,

93 In fluid controlled,

94 With indicator or alarm,

Flue or heater attached

95 Expanding fluid,

96 Expanding solid,

97 Cooled element,

98 Fluid transmission,

236. AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION—Continued.

Thermostatic

99 Expanding fluid

100 Float or piston operation,

101 Expanding solid

102 Concentric elements,

103 Conduit,

104 Fire pot.

237. HEATING SYSTEMS.

1 Miscellaneous
2 **Automatic control**
3 Brooder and incubator
4 Water
5 Car
6 Steam
7 Combined radiator and boiler
8 Water
9 Steam
10 Gas displaced
11 Compressed air
12 Processes
12.1 **Heat and power plants**
12.2 Fire engine
12.3 Vehicle
12.4 Car
12.5 Smoke
12.6 Air
12.7 Radiator
12.8 Steam
13 **Plants**
14 **Brooder and incubator**
15 Water
16 **Combined radiator and boiler**
17 Fluid fuel
18 Solid fuel
19 **Combined with water heater**
28 **Vehicle**
29 Stove
30 Air casing
31 Depending
32 Fluid fuel
33 Radiator
34 Water
35 Car boiler
36 Fluid fuel
37 Train steam
38 Injected

237. HEATING SYSTEMS—Continued.

Vehicle
Water
39 Train steam
40 Steam
41 Car boiler
42 Train steam
43 Heated floor
44 Heat accumulator
45 Incased radiator
69 **Heated floor**
46 **Ventilating**
47 Stove
48 Furnace
49 Inclosed radiator
50 **Air**
51 Fireplace
52 Stove
53 Furnace
54 Upper-room drum
55 Flue heated
56 **Water**
57 Fluid fuel
58 Steam
59 Circulation
60 Geyser boiler
61 Auxiliary boiler
62 Boiler loop
63 Pump
64 Steam displacing
65 Pressure regulator
66 Expansion tanks
67 **Steam**
68 Air discharge
70 **Heat radiators**
71 Water, steam
72 Injected
73 Steam
74 Circuit
75 Heat accumulator

237. HEATING SYSTEMS—Continued.

Heat radiators
76 Ceramic
77 Foot warmer
78 Air moistener
79 Shields
80 **Antifreezing devices**
81 **Processes**

238. RAILWAYS, SURFACE TRACK.

1 Miscellaneous
2 **Roadbed**
3 Highway track
4 Metallic
5 Concrete
6 Continuous
7 Concrete
8 Street crossing
9 Rail paving
10 **Portable track**
11 Embankment or fill
12 Crossovers
13 House moving
14 Traction mats
14.1 **Electrical connections**
14.2 From rail to noncontiguous rail or other object
14.3 Special rail
14.4 Combined rail-joint or support
14.5 Interposed conductor
14.6 Rail web contacting
14.7 With intermediate bond-wire support
14.8 Dowel pin or inserted key type
14.9 Protected bond
14.10 Plural or laminated bond
14.11 On both sides of rails

238. RAILWAYS, SURFACE TRACK—Continued.

Electrical connections
14.12 Rail bond forms
14.13 Rail-head attached
14.14 Rail-base or flange attached
14.15 Molded joint
15 **Track curves**
16 Rollers
17 **Guard rails**
18 Spring
19 Under main rail
20 Two-rail chair
21 Two-rail clamps
22 Spacers
23 Tapered
24 **Stringers**
25 Concrete
26 Metallic
27 **Tie arrangement**
28 Diagonal
29 **Ties**
30 Forms
31 Jointed
32 Hinged
33 Pivoted ends
34 Detachable ends
35 Multiple section
36 Vertical sandwich
37 Horizontal sandwich
38 Twin
39 Complementary sliding lock
40 Truss
41 Integral
42 Stringer ends
43 Loop or hook ends
44 Spread ends

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Ties
Forms
45 Special
46 Rail joint
47 Bridge joint
48 Spring
49 Old rail
50 Rods
51 Railbase
52 Turnbuckle
53 Screw rod
54 Cross section
55 Two-part
56 Channels
57 I beam
58 Angles or T's
59 Channel flange down
60 Sheet metal
61 Rolled
62 Channel flange up
63 Sheet metal
64 Rolled
65 I beam
66 Rolled
67 T
68 Cast
69 Inverted
70 Tubular
71 Multiple
72 Rectangular
73 Vertical telescope
74 Separate lid and bottom
75 Separate bottom
76 Separate lid
77 Folded sheet
78 Integral
79 Cast

Ties
Cross Section
Tubular
80 Triangular
81 Circular
82 Corrugated
83 Nonmetallic
84 Plastic compound
85 Internal reenforcements
86 Truss
87 Tube
88 Cast
89 Rolled section
90 Closed loop
91 Rods
92 Crosstied
93 Foraminous sheet
94 Wire
95 Armoured
96 Box
97 Tube
98 Side and bottom
99 Side and top
100 Sides
101 Top
102 Top and bottom
103 Bottom
104 End closures
105 Spacers
106 Anchor lugs and ribs
107 Insulation
108 Sectional tie
109 **Pedestals**
110 Pot
111 Cast
112 Wrought plate
113 Inverted U
114 Tube or box

Pedestals
115 Concrete block
116 Chair bar
117 Bar core
118 Wood block
119 Pier
120 Screw
121 **Rail arrangement**
122 **Rails**
123 Rack
124 Turnout
125 Vignoles
126 T-base insert
127 Channel
128 Integral
129 Trough and filler
130 T rail
131 Webless or flat
132 Reversible
133 Triple head
134 Tubular
135 Integral
136 Step tread
137 Biped
138 Base bar
139 Side bars
140 Detachable guard or step
141 Split base and web
142 Split tread
143 Detachable head
144 Lap web
145 Grooved web
146 Integral grooved base
147 Web clamp
148 Tread surfaces

Rails
149 Webs
150 Substance
151 **Rail joints**
152 Insulated
153 Transverse abutting
154 Chair
155 Twin
156 Base plate or bolted
157 Angle
158 Weber type
159 Splice bars
160 With base plate
161 In channel
162 Cast on
163 Molten filler
164 Welded
165 Switch rail
166 Pivoted
167 Compromise
168 Truss rod
169 Parallel beams
170 Gravity
171 Expansion deflectors
172 Vertical adjustment
173 Yielding rail end
174 Variable levels
175 Special rails
176 Channels
177 T-web U base
178 Flat
179 Internal key
180 Flush web key
181 Web-key splice lock
182 Joint lug key

238. RAILWAYS, SURFACE TRACK—Continued.

Rail joints

183 Integral web key and bars,
184 Web locks,
185 Z form
186 Base connected,
187 Chair
188 Twin
189 Base stiffener,
190 With base plate,
191 Base bolted,
192 Lapping base sections,
193 Interlocked base sections
194 Longitudinal keys,
195 Angle
196 Pivoted,
197 Splice-lug engagement,
198 Sliding splice lock
199 Base-plate underlap,
200 Weber type,
201 Transverse slide
202 Screw operated,
203 Horizontal wedge,
204 Vertical wedge,
205 Integral
206 Base filler,
207 One-side filler,
208 Two-side filler,
209 Base plate
210 Top flange,
211 Angle-bar underlap,
212 Angle-bar overlap,
213 Base stiffeners,
214 Distorted,
215 Center seat,
216 Rail lock,
217 Side clips,
218 Tread bridge
219 Rail-head insert,

238. RAILWAYS, SURFACE TRACK—Continued.

Rail joints

Tread bridge
220 Rail-head cover,
221 Notched head
222 Twin,
223 Head section
224 Saddle,
225 Rail section
226 Splice key,
227 Spacer
228 Expansible
229 Web posts,
230 Scarf
231 Longitudinally assembled
232 Twin,
233 With vertical drop,
234 Longitudinal or vertical,
235 Vertical drop,
236 Laterally assembled
237 Twin,
238 Longitudinal lock
239 Twin,
240 Angularly assembled
241 Longitudinal,
242 Lateral,
243 Splice bars
244 Multiple part,
245 Toggle,
246 Rail guide
247 Attached,
248 Rail sleeve,
249 Longitudinal bolts,
250 Bar lugs and splice keys,
251 Bar bolts and splice key,
252 Slotted bolt locks,
253 Bolt keys,
254 Rail-groove swing,
255 Cam tightened,

238. RAILWAYS, SURFACE TRACK—Continued.

Rail joints

Splice bars
256 U bars and loops,
257 Vertical bevel flange,
258 Tapered,
259 Springs,
260 Fasteners
261 Double and split keys,
262 Nut and bolt lock,
263 Adjustable joint clamps.
264 **Rail seats**
265 With anchor in concrete,
266 English chair
267 T rail,
268 ⊓ rail,
269 Cast
270 With tie,
271 Plane top,
272 Wrought
273 With tie,
274 Plane top,
275 Twin jaws
276 Wrought,
277 Pivoted,
278 Jaw and seat,
279 Gravity,
280 Saddles,
281 Vertical adjustment,
282 Lateral adjustment,
283 Cushions
284 Metal springs,
285 Wood blocks,
286 Spiking blocks.
287 **Tie-plates**
288 Gauge,
289 Plural tie,
290 Lap
291 Interlock,

238. RAILWAYS, SURFACE TRACK—Continued.

Tie-plates

292 Rail brace
293 Integral,
294 Spike lock
295 Lug on spike,
296 Pawl,
297 Anchors
298 Integral,
299 Tie butting,
300 Sleeve,
301 Reversible,
302 Spring,
303 Screw spike,
304 Top surface,
305 Rotary,
306 Rail-base seats,
307 Contour,
308 Spike-hole arrangement,
309 Spike-shank brace.
310 **Fastenings**
311 Welded,
312 Protective boxes and closures,
313 Universal,
314 Yoke,
315 Rail anchors
316 Pawl,
317 Cam,
318 Rail recess,
319 Rail lug,
320 Distorted rail,
321 Tie contact
322 Cam,
323 Swinging clip,
324 Wedge,
325 Bevel slide
326 Reversed lap,
327 Twin jaws
328 With wedge,

238. RAILWAYS, SURFACE TRACK—Continued.

Fastenings

Rail anchors

Tie contact

329 Diagonal

330 Integral,

331 Transverse slide

332 Screw operated,

333 Horizontal-wedge operated,

334 Vertical-wedge operated,

335 Abutting screw point,

326 Rail brace

337 Vertical slide,

338 Clamps

339 Gauge,

340 Multiple face,

341 Cam adjustment,

342 Nut type,

343 Anchors

344 Vertical face,

345 Vertical shank,

346 Ratchet,

347 Bevel guide,

348 Internal arm,

349 Spring,

350 Integral with tie,

351 Clip type

352 Double,

353 Vertical wedge,

354 Horizontal wedge

355 Hooks

356 Pivoted,

357 Twin

358 Through bolt,

359 Single pivot,

360 Lever,

361 Wedges

362 Parallel,

363 Alined,

238. RAILWAYS, SURFACE TRACK—Continued.

Fastenings

Clamps

Wedges

364 Flange,

365 Locks,

366 Spikes

367 Interlock,

368 Bent,

369 Split end,

370 Plug,

371 Socket,

372 Screw

373 Sockets,

374 Socket and wedge,

375 Lock,

376 Ratchet,

377 Bolt anchors and sleeves,

378 U bolts and clips.

379 **Foot guards**

380 Switch point,

381 Wheel depressed.

382 **Deadening noise.**

239 NO CLASS.

240 ILLUMINATION.

1 **Miscellaneous.**

1.1 **Daylight lamps.**

1.2 **Aviation lights.**

1.3 **Photographic lights.**

1.4 **Operating-table lights.**

2 **Combined light and structure**

2.1 Dial illuminator,

2.11 Weighing-machine illuminator,

2.12 Phonograph illuminator,

2.13 Door knob and keyhole illuminator,

2.14 Sewing-machine illuminator,

2.16 Combined fan and lamp,

2.17 Telephone illuminator,

2.18 Inspection lamps,

2.25 Self-luminous articles,

3 Arena

3.1 Color projector,

4 Furniture

4.1 Mirrors.

4.2 Mirrors.

5 Oven,

6 Show case,

6.4 Portable, self-contained, electric

6.41 Portable firearms,

6.42 Canes, umbrellas, and similar articles,

6.43 Clocks and watches,

6.44 Spirit-level illuminator,

6.45 Toilet-case illuminator,

6.46 Implement illuminator,

7.1 **Vehicle lighting.**

7.12 Locomotive headlight and number-plate illuminators,

7.15 Locomotive headlight and signal illuminators,

7.2 Carriage lights,

240. ILLUMINATION—Continued.

Vehicle lighting—

7.25 Exterior and interior illuminators,

7.3 Steps and platform illuminators,

7.35 Dome lights,

7.4 Berth lights,

7.45 Trolley-car dashboard lights,

7.5 Ship's running lights,

7.55 Bicycle lights

7.6 Self-electric generators,

7.7 Aircraft mounted,

Automobile

8.1 Combined with fender

8.11 Combined with radiator,

8.12 Combined with hub,

8.14 Combined instrument-board and trouble lights,

8.16 Instrument-board lights,

8.18 Trouble lights,

8.2 Side lights

8.22 Parking,

8.24 Lighted upon turning of car,

8.25 Light shifted upon turning of car,

8.26 Running-board lights,

8.28 Motor-meter lights,

8.3 Tail-end lights,

8.4 Light indicators for headlights,

8.41 Light indicators for tail lights,

9 **Systems.**

10 **Decorative lights**

10.1 Rotative.

10.5 **Portable, self-contained, electric lamps**

10.6 Battery

10.61 Battery-supported lamp,

10.62 Imitation-firearm type,

10.63 Hand-lantern type,

10.64 Imitation-candle type,

10.65 Flat casing,

240. ILLUMINATION—Continued.

Portable, self-contained, electric lamps—
Battery—
10.66 Tubular casing,
10.67 Angular head,
10.68 Direct battery contact,
10.69 Focusing.
11 Lanterns
11.1 Acetylene,
11.2 Electric
11.3 Safety,
11.4 Vapor or gas tube,
12 Barrel illuminators,
13 Candle type,
15 Dark,
16 Jack-o'lanterns,
17 Lamp-chimney type,
18 Miners' safety
19 Locks,
20 Photographic,
22 Signal
23 Color screen,
24 Rotatable,
25 Street,
26 Submarine,
27 Tubular
28 Bases,
29 Domes,
30 Globe operators
31 Combined lifting and swinging,
32 Lifting,
33 Swinging,
34 Tubes,
35 Angle,
36 Collapsible,
37 Convertible
37.1 Automatic light substitution,
38 Hand

240. ILLUMINATION—Continued.

Lanterns—
Hand—
39 Color screen,
40 Frames,
41 Projectors
41.1 Indirect lighting,
41.15 Surgical or dental spotlights,
41.2 Combined with lateral beam projector,
41.25 Reflector and multiple filaments,
41.3 Reflector and lens,
41.35 Reflectors
41.36 Corrugated, faceted, or fluted,
41.37 Varied focus, axis, or vertex,
41.38 Catadioptric,
41.4 Anti-glare lenses,
41.5 Combined closure and reflector fasteners,
41.55 Casing closures,
41.6 Tiltable or rotatable reflector and bulb unit
41.61 Electromagnetic,
41.62 Pneumatic,
44 Adjustable light and reflector,
44.1 Adjustable reflector,
44.2 Adjustable light source
44.25 Electromagnetic,
44.26 With sighting device,
44.27 Combined with switch,
45 Dimmers
45.2 Shutter slats,
45.4 Curtain,
45.6 External pivoted,
47 Ventilating and cooling,
48 Vibratory,
48.2 Screen
48.4 Lens,
48.6 Bulb,
49 Revolving,

240. ILLUMINATION—Continued.

Lanterns—
50 Bases,
51 Domes.
52 Light supports
52.1 Quick attachable,
52.2 Suction cup,
52.3 Handles and bails,
52.4 Imitation candles,
52.5 Flash-light supports,
52.6 Vase attached,
53 Convertible,
54 Combined guard and holder,
55 Campaign torch,
57 Vehicle
57.1 Hand lantern holders,
58 Bicycle,
59 Body attached
60 Cap,
61 Dirigible
61.1 Marine and aircraft searchlights,
Head lamps
61.2 Manually and automatically operated
61.3 Gear actuator,
61.4 Flexible actuator,
61.5 Link and lever actuator,
61.6 Manually rotatable and tiltable,
61.7 Manually rotatable,
61.8 Manually tiltable,
61.9 Electromagnetically operated,
61.10 Fluid-pressure operated,
61.11 Spot lamps
61.12 Directly actuated,
61.13 Intermediate operator.
62 Automatic
62.1 Locomotive,
62.2 Operated by centrifugal force,
62.3 Fluid pressure,
62.4 Electromagnetic,

240. ILLUMINATION—Continued.

Light supports—
Dirigible—
Automatic—
62.5 Steering-post control
62.51 Gear,
62.52 Link and lever
62.53 Pin and slot,
62.54 Telescopic,
62.6 Stub-axle control
62.61 Gear,
62.62 Link and lever
62.63 Pin and slot,
62.64 Telescopic
62.65 Pin and slot,
62.7 Tie-rod control
62.71 Gear,
62.72 Link and lever
62.73 Pin and slot,
62.74 Telescopic
62.75 Pin and slot.
63 Adjustable for trimming
Electric
64 Post
65 Switch,
66 Switch,
67 Vertically adjustable
68 Clamp,
69 Counterweight,
70 Friction,
71 Spring drum,
Brackets
72 Combined,
73 Electric,
74 Gaseous fuel,
75 Liquid fuel,
76 Chandeliers
77 Combined,
78 Electric,
79 Gaseous fuel,

240. ILLUMINATION—Continued.

Light supports—
Chandeliers—
80 Liquid fuel,
Stands
81 Electric,
82 Gaseous fuel,
83 Liquid fuel,
84 Posts,
85 Bracket and chandelier hangers
86 Arc-lamp hangers,
87 Canopies,
88 Cord supported,
89 Antislipping,
90 Resilient,
91 Harps,
92 **Combined light protectors and modifiers.**
93 **Combined reflectors and refractors.**
94 **Chimneys**
95 Attachments,
96 Composite,
97 Supports
98 Base
99 Modified chimneys.
100 **Globes.**
102 **Guards.**
103 **Reflectors**
104 Canopy,
105 Side.
106 **Refractors**
106.1 Lenses,
107 Liquid.
108 **Shades**
109 Canopy,
110 Side.
119 **Burner-tip cleaners.**
120 **Smoke bells.**
121 **Spark arresters.**

240. ILLUMINATION—Continued.

122 **Switches and valves**
123 Operators.
124 **Taps.**
125 **Combined shade and bowl supports**
126 Socket attached,
127 Socket covers.
128 **Shade or bowl supports**
129 Double-ring frame
130 Socket extension
131 Clamping jaws,
132 Socket covers
133 Clamping jaws,
134 Spring ring,
135 Base
136 Spider,
137 Removable socket collar,
138 Spring frame on bulb,
139 Spring frame on body of chimney,
140 Side,
141 On candle,
142 Combined with shade,
143 Combined with socket or shell,
144 Adjustable,
145 Collapsible,
146 Drop
147 Hinged,
Interior arms and ring
148 Crown engaged.
149 **Inverted-bowl suspension devices**
150 Combined with light supports.
151 **Lens holders or supports**
152 Perforated plate.

241 GARMENT SUPPORTERS.

1 **Hose**
2 Belt attached,
3 One-point suspension,
4 Shoulder suspension.
5 **Limb encircling**
6 Garment attached.
7 **Waist-line body garment**
8 Belts,
9 Belt attached,
10 Belt-inserted section,
11 Belt slide,
12 Shoulder suspension
13 Belt converting,
14 Binding clips
15 Button loop,
16 Connection,
17 Braces combined,
18 Cast offs,
19 Connections
20 Lacing,
22 Self-adjusting
23 Cord or strap,
24 Pivoted,
25 Garment attachments,
26 Step adjusting,
27 Tabs
28 Drawers supports,
29 Two-point suspension,
30 Waist formers
31 Buckles.

242 WINDING AND REELING.

1 **Miscellaneous.**
2 **Ball or mass winding.**
3 **Spheroids.**
4 **Ring winding**
5 Armatures,
6 Taping and insulating.
7 **Cylinder and conoid winding**
8 Armatures,
9 Magnets and coils
10 Taping and insulating,
11 Pails and pipes,
Axially
13 Armatures.
16 **Spoolers**
17 Multiple.
18 **Bobbin and cop winding**
19 Cutting devices,
20 Sewing-machine shuttles
21 Cutting devices,
22 Stops,
23 Disk type,
24 Thread pressers and pads,
25 Wire,
26 Symmetrical layers,
27 Cone wind
28 Detectors and stops
29 Thread break or exhaust,
30 Load,
31 Quick traverse,
32 Multiple,
34 Pressers and shapers,
35 Spindles and appurtenances,
35.5 Multiple,
35.6 Reserve thread uniting,
36 Detectors and stops
37 Thread break or exhaust
38 Doubling machines,

Processes

1 By operations other than by force of contact with solid surface
2 With cell rupturing or liberation of contained liquids
3 With solidifying, consolidating or shaping
4 Laminated or fibrous mineral material
5 By utilizing kinetic energy of projected or suspended material
6 Cereal and other seeds or seed parts
7 With operation to detach or loosen adhering hull portions
8 With application of fluid to, or heating or cooling of, whole seed
9 With separation or classification
10 With recombination or recirculation of separated parts
11 Successive alternate separation and comminution steps
12 With application of fluid
13 Plural successive comminuting operations
14 Selective or differential comminution of mixed or bonded solids
15 With application of fluid or lubricant material
16 To aid dispersion or prevent chemical reaction, deliquescense, agglomeration or frothing
17 With additional heating or cooling
18 Gas or vapor
19 To classify or separate material
20 Liquids added to classify or separate material
21 Liquids added to make pulp or suspension
22 Application of solids to material
23 With heating or cooling of material
24 With classification or separation of material
25 Combined
26 By contact between relatively moving portions of material
27 Subjecting material to impact by moving comminuting surface
28 Wood and similar natural fibrous vegetable material
29 Plural successive comminuting operations
30 Miscellaneous

Apparatus

31 With explosion preventing or relieving means
32 With overload release means
33 With automatic control
34 Of feed of material
35 By speed or torque of comminutor drive
36 Of comminutor drive
37 Of comminuting surface contiguity
38 Including means applying fluid to material
39 Fluid comminutor type
40 Stationary abutment impact only
41 Plural fluid applying means on same material
42 With plural comminuting zones
43 With plural comminuting zones
44 Parallel material flow type
45 Horizontal fluid current past successive comminuting zones
46 Liquid submerged comminuting zone
47 Gas swept comminuting zone
48 With recirculation of gas to comminuting zone
49 Gas borne material applied to screen
50 Elevating fan on comminutor shaft
51 Screen forms part of comminuting surface
52 With return of removed oversize material to comminuting zone
53 Suction applied above and coaxially of comminuting member or members
54 Horizontal gas current through rotary drum
55 Comminuting element, or comminuting element attached, gas moving means
56 Gas moving means and rotary comminuting element on same shaft
57 Local application within comminuting zone
58 Suction applied above and coaxially of comminuting member or members
59 With gas flow control means (non-automatic)
60 Applied subsequently to comminuting
61 With recirculation of material to comminuting zone
62 Applied prior to comminuting

Apparatus

63 With simultaneous control of inter-related feed, drive and/or surface positioning means
64 Control of feed and surface positioning means only
65 With temperature modification of material
66 Temperature modification of comminuting member
67 Thermal fluid within or carried by moving comminuting member
68 With separation or classification of material
69 Comminuted material discharge permitting screen
70 Screen partition or end wall in rotary drum
71 Plural partitions or end walls
72 Series flow of material
73 Arcuate screen concentric with rotary comminuting member
74 Annular screen above or surrounding comminuting zone
75 Parallel material flow through plural comminuting zones and/or separators
76 Series material flow only through plural alternate comminuting zones and separators
77 Comminuting zone interposed between plural separators
78 Separator interposed between plural comminuting zones
79 Separator in discharge from comminuting zone
80 Oversize return to comminuting zone
81 Separator in feed to comminuting zone
82 Projected material trap chamber
83 Comminuting surface provided with openings to permit discharge of material
84 Cooperates with moving comminuting surface or member
85 Rotary comminuting surface having openings cooperates with moving surface
86 Cooperates with rotary striking member (e. g., hammer mills)
87 Screen or screen elements move during comminution
88 Provided with special comminuting surfaces or characteristics

Apparatus

Comminuting surface provided with openings to permit discharge of material
Cooperates with moving comminuting surface or, member
Cooperates with rotary striking member (e. g., hammer mills)
Adjustable, hinged, or dumping type screen or support
90 Stationary comminuting surface having openings cooperates with rotary comminuting surface
91 Rotating comminuting surface having openings
92 Radial comminuting face
93 Outer peripheral comminuting face
94 Reciprocating comminuting surface having openings
95 Stationary comminuting surface having openings
96 Oversize rejection by comminuting surface
97 With recirculation of material to comminuting zone
98 With agitator
99 Bottle breakers
100 With independent removable or detachable material receiver or receiver engaging means
101 Combined
102 Comminuting surface deformable by contact with material
103 Rolls frictionally driven and supported by relatively moving surfaces (e. g., ball chasers)
104 With additional diverse type of comminutor
105 Plural comminuting zones
106 Frictional drive surface on horizontal axis
107 Plural rotary or oscillatory surfaces cooperate with common surface (e. g., chasing mills)
108 With additional diverse type of comminutor
109 With material feeding mechanism or control
110 Plural surfaces move across common surface
111 Outer peripheral contact of common surface by plural surfaces
112 With surface cleaner or scraper
113 Plural surfaces cooperate with each other

Apparatus

Plural rotary or oscillatory surfaces cooperate with common surface (e. g., chasing mills)
114 Radial faces of plural rotary surfaces cooperate with common surface
115 Plural sets of plural surfaces cooperating with plural common surfaces
116 Coaxial rotors radially arranged on same side of common surface axis
117 Common surface moves during comminution
118 With planetary movement of plural surfaces
119 With material moving or discharge means
120 Positively driven plural surfaces
121 Plural surfaces forcible away from common surface
122 Common surface rotates on horizontal axis
123 Planetary movement of plural surfaces
124 With material moving or discharge means
125 Compounded planetary movement
126 Positively driven plural surfaces
127 Forcible away from common surface
128 Pivotally mounted for forced movement
129 Centrifugally urged toward contact
130 With centrifugal force modifying means
131 Centrifugally urged toward contact
132 With means in addition to weight of plural surfaces for urging surfaces toward contact
133 Rotors independently forcible away from common surface
134 Parallel material flow through plural comminuting zones
135 With unitary or interconnected feed mechanisms or controls for plural zones
136 Interconnected means forcing material against moving comminuting surface or surfaces
137 All comminuting zones of loose grinding body type
138 All comminuting zones of rotary striking member type
139 All comminuting zones of cooperating surface type
140 All comminuting zones of compound movement type

Apparatus

Parallel material flow through plural comminuting zones
All comminuting zones of cooperating surface type
141 All comminuting zones of rotary surface type
142 Circumferential or tangential material flow only
143 All cooperating surfaces rotate
144 Rotary surfaces of separate zones coaxial
145 Simultaneous adjusting or positioning of separate surfaces
146 Axial or radial material flow only
147 All comminuting zones of reciprocating surface type
148 Oscillating surface
149 Vertical rectilinear movement
150 Annularly mounted moving surfaces
151 All comminuting zones of single surface type
152 Series material flow only through plural comminuting zones
153 All comminuting zones of loose grinding body type
154 All comminuting zones of rotary striking member type
155 All comminuting zones of cooperating surface type
156 All comminuting zones of compound movement type
157 All comminuting zones of rotary surface type
158 Circumferential or tangential material flow only
159 All cooperating surfaces rotate
160 One surface of each couple non-rotary
161 Axial or radial material flow only
162 Common axis of rotation
163 Horizontal axis
164 All comminuting zones of reciprocating surface type
165 Vertical rectilinear movement
166 With comminuting member cleaner or scraper
167 Contacting working surface of rotary comminuting member

Apparatus

168 Hand support comminutor
169 Reciprocating cooperating comminuting surfaces
170 Loose grinding body comminutor (e. g., ball or rod mills)
171 With feed and/or discharge
172 With independent means moving or guiding the material and/or grinding bodies in receptacle
173 Rotary grinding body pusher (e. g., ball chasers)
174 Horizontal axis
175 Compound movement receptacle
176 Rotating receptacle
177 Tiltable axis of rotation
178 Roller supported receptacle
179 Receptacle structure
180 With non-axial opening
181 With lifting or distributing at extremity of receptacle
182 With lining
183 With lifting or distributing characteristics
184 Grinding bodies
185 Rotary striking member (e. g., hammer mills)
186 With feed and/or discharge mechanism or control
187 With moving cooperating surface or member
188 Axial and/or radial flow of material
189 Circumferential or tangential flow
190 With intermeshing impact members
191 Rotor structure
192 With striking member adjusting means
193 With loosely mounted striking member
194 Striking member pivoted to rotor
195 Striking members or hammers
196 Loose ring type
197 With attached wear member
198 Cooperating comminuting surfaces (e. g., jaw crushers)
199 Batch type (e. g., mortar and pestle)
200 Endless belt type comminuting surface or surfaces
201 Compound movement comminuting surface or surfaces

Apparatus

Cooperating comminuting surfaces (e. g., jaw crushers)
Compound movement comminuting surface or surfaces
202 With feeding and/or discharging mechanism or control
203 Rotary component
204 Circumferential or tangential flow of material
205 Rotating and reciprocating surface
206 With moving cooperating surface
207 Gyratory or planetary movement
208 Eccentric drive sleeve within gyratory member
209 With upper guide or support for gyratory member
210 Unbalanced weight drive
211 Gyratory member yieldingly mounted
212 Upper gyratory drive
213 Bottom shaft adjusting means
214 Eccentric shaft gyratory drive
215 Eccentric gyratory sleeve below gyratory member
216 With gyratory member sealing means
217 Unitary comminuting member and eccentric strap
218 With moving cooperating surface
219 Comminuting member pivoted to oscillating supporting link
220 Rotary surface or surfaces
221 Circumferential or tangential flow of material (e. g., roll mills or roll and concave mills)
222 With material feed and/or discharge mechanism or control
223 Endless belt conveyor
224 Hopper
225 With roll or rotary material agitator
226 With material retaining means at axial end of rotary surface

Apparatus

Cooperating comminuting surfaces (e.g., jaw crushers)
Rotary surface or surfaces
Circumferential or tangential flow of material (e. g., roll mills or roll and concave mills)
227 Both cooperating surfaces rotate (e. g., roll mills)
228 Internal comminuting surface
229 Surfaces rotate in same direction, and/or mounted on non-horizontal axis
230 Adjustably or yieldably mounted rotary surface
231 Hydraulic or pneumatic mounting and/or axially yieldable or adjustable
232 Pivoted roll support
233 Adjustable pivot
234 Both rotating surfaces adjustable or yieldable
235 Cooperating non-smooth surface characteristics
236 Intermeshing
237 With non-rotary surface moving means
238 With plural alternatively usable non-rotary surfaces and/or retractable rotor projections and/or adjustably or yieldably mounted rotary surface
239 Non-rotary surface adjustable or yieldable relative to rotary surface
240 Sectional non-rotary surface having independently adjustable or yieldable parts
241 Radially of rotary surface
242 Cooperating non-smooth surface characteristics
243 Intermeshing
244 Axial and/or radial flow of material (e. g., disk mills or cone and shell mills)
245 With feed and/or discharge mechanism or control
246 Axially mounted rotary propeller or screw
247 Horizontal axis
248 Hopper supply
249 Subjacent shaking shoe or receptacle

Apparatus

Cooperating comminuting surfaces (e.g., jaw crushers)
Rotary surface or surfaces
Axial and/or radial flow of material (e. g., disk mills or cone and shell mills)
250 With moving cooperating surface
251 Both cooperating surfaces rotate
252 Non-coaxial or eccentric
253 Vertical axis
254 With rotary surface axis non-coaxial or eccentric relative to non-rotary surface axis
255 Horizontal axis
256 Adjustable rotary member
257 Vertical axis
258 Rotary shaft supported above rotary comminuting member
259 Adjustable rotary member
260 Cooperating non-smooth surface characteristics
261 Intermeshing
262 Reciprocating surface or surfaces
263 Parallel motion
264 Oscillating comminuting surface
265 With feed and/or discharge mechanism or control
266 With moving cooperating surface
267 Link and eccentric type actuator
268 Serial pivoted links type actuator or link with lever type actuator (toggle type)
269 Means actuating pivot of serial links
270 Vertical rectilinear movement (e. g., stamp mills)
271 With feeding and/or discharging mechanism or control
272 With means to rotate moving surface on non-comminuting stroke
273 Gravity projected surface only

Apparatus

274 Stationary comminuting surface or material bed
275 Centrifugal projection of material
276 Conveyor material forcing means (e. g., scroll type or locomotive stoker type)
277 Rotating comminuting surface
278 Internal or radial comminuting face
279 With means to support material for rotation during comminution
280 With means to force material toward periphery of comminuting surface
281 Means engaging sides of column of material
282 Radially arranged rectilinearly reciprocating follower
283 Reciprocating comminuting surface
284 Mutual attrition or compression comminutors
285 Comminutor mounting means, frames or other normally stationary structure
286 With means to adjustably or yieldably mount normally stationary comminuting element
287 Pivotally mounted
288 Self adjusting (e. g., universal mounting)
289 Yielding
290 Yieldingly mounted
291 Comminuting elements
292 With balancing means
293 Cylindrical or frusto-conical (i. e., peripheral comminuting face)
294 Sectional or separable surface elements
295 Annular sections
296 Disk-like comminuting surface (i. e., radial comminuting face)
297 Plural comminuting faces
298 Prefabricated assembled surface sections or parts
299 Annular internal comminuting face
300 Wear face to backing connections
301 Miscellaneous

1 **Miscellaneous**
2 **Ball or mass winding**
3 **Spheroids**
4 **Ring winding**
5 Armatures
6 Taping and insulating
7 **Cylinder and conoid winding**
8 Armatures
9 Magnets and coils
10 Taping and insulating
11 Pails and pipes
Axially
13 Armatures
16 **Spoolers**
17 Multiple
18 **Bobbin and cop winding**
19 Cutting devices
20 Sewing-machine shuttles
21 Cutting devices
22 Stops
23 Disk type
24 Thread pressers and pads
25 Wire
26 Symmetrical layers
27 Cone wind
28 Detectors and stops
29 Thread break or exhaust
30 Load
31 Quick traverse
32 Multiple
34 Pressers and shapers
35 Spindles and appurtenances
35.5 Multiple
35.6 Reserve thread uniting
36 Detectors and stops
37 Thread break or exhaust
38 Doubling machines

Bobbin and cop winding
Detectors and stops
39 Load
40 Doubling machines,
41 Ejectors,
42 Doubling machines,
43 Quick traverse,
43.3 Building mechanisms
43.4 Warp wind,
43.5 Weft wind
43.6 Varying traverse and gain,
43.7 Varying traverse,
45 Tension devices,
46 Spool and bobbin lifters,
46.2 Driving connections
46.3 Cop tube,
46.4 Clutch
46.5 Centrifugal,
46.6 Resilient head,
46.7 Resilient socket
46.8 Coil spring.
47 **Cordage**
47.5 Storage on sheaves,
48 Cutting devices,
49 Detectors and stops,
50 Cards, boards, and forms,
51 Heddle and seine needles,
52 Tatting shuttles,
53 Hank and skein winding.
54 **Reeling and unreeling**
55 Fabrics

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Reeling and unreeling
Fabrics
55.2 Delivery-roll holders
55.3 Multiple roll
55.4 With cutter,
55.5 With cutter,
56 Cutting devices,
57 Detectors and stops,
58 Web-roll supply,
59 Lapped or butted lengths,
60 Bandage rolling,
61 Cards, boards, and forms,
62 Cloth,
63 Automatically contracting reel,
64 Revoluble reel carriers,
65 Friction-drum drive
66 Multiple drum,
67 Belt reels,
68 Cores and holders
69 Note-sheet rolls,
70 Ribbon and film spools
71 Camera,
72 Contractile
73 Lengthwise,
74 Web fasteners,
75 Tension devices,
76 Guards and guides,
77 Reels
78 Metal working
79 Coil conveying,

Reeling and unreeling
Reels
Metal working
80 Multiple.
81 Coil strippings,
82 Revoluble-coiler,
83 Receptacle,
84 Retractile arm,
84.1 Fishing-rod type
84.3 Spring operated,
84.4 Line traverser,
84.5 Brake and drag
84.6 Clicker,
84.7 Releaser,
84.8 Tape-measure type
84.9 Spring drum,
85 Carriers
86 Hose
87 Wheeled
88 Automatic winders,
89 Loop attached,
90 Wheeled
91 Automatic winders
92 Guides,
93 Guides,
94 Trundle reels,
95 Wheel attached,
96 Hand or body
97 Casing,
98 Spring-drum article holders,

Reeling and unreeling
Reels
Carriers
99 Brakes,
100 Clothesline type
101 Casing,
102 Spring drum,
103 Nailing and stapling,
104 Line driers,
105 Box strap,
106 Bracket supported,
107 Spring-drum type
108 Gearing,
109 Vertical,
110 Contractile
111 Pivoted arm
112 Lazy-tongs type,
113 Slidable arm
114 Auxiliary,
115 Knockdown or collapsible,
116 Separable disks or heads.
117 **Winding drums and sand reels.**
118 **Bobbins and spools**
119 Paper, pulp, or leather,
120 Cop type
121 Metal,
122 Paper, pulp, or leather,
123 Metal heads,
124 Removable heads,

242. WINDING AND REELING—Con.
Bobbins and spools
125 Thread fasteners and guides
126 Separable.
127 Skein holders.
128 Unwinding devices.
129 Coil holders.
130 Bobbin supporters and holders
131 Creels,
132 Receptacle or trough.
133 Take-ups.
134 Spool holders
135 Thread cutters,
136 Carrier attachments,
137 Receptacles
138 Single spool,
139 Stands,
140 Thread guards and guides.
141 Twine holders
142 Cutters,
143 Take-ups
144 Pivoted guide,
145 Rotary,
146 Receptacle.
147 Tension devices
148 Alarms and indicators
149 Clamp
150 Disk type,
151 Roller
152 Fluted,
153 Tortuous course
154 Adjustable,
155 Wheel or pulley,
156 Brakes.
157 Guides
158 Traverse mechanism.
159 Special packages
160 Cone wind,
161 Bobbins, cops, and spools.

243 PNEUMATIC DISPATCH.

1 Systems
5 Trunk line and branches,
6 Relay.
Active on transit
7 Motor actuating
8 Pressure,
9 Exhaust,
10 Reservoir
11 Pressure,
12 Exhaust,
13 Timers
14 Pressure,
15 Exhaust,
16 Selective delivery
17 Pressure,
18 Exhaust,
2 Combined pressure and exhaust,
3 Pressure,
4 Exhaust.
Terminals
19 Combined delivery and sending.
Delivery
20 Pressure
21 Double gate,
22 Single gate,
23 Exhaust,
24 External receivers,
Sending
25 Pressure
26 Lock
27 Timers,
28 Exhaust.
29 Switches
30 Main and branch line block,
31 Tube section.
32 Carriers
33 Wheeled.

243. PNEUMATIC DISPATCH—Contd.
Carriers
Sliding
34 Side opening,
35 End opening.
36 Signals and indicators.
37 Obstacle detectors.
38 Details
39 Carrier.

244 AERONAUTICS.

1 Miscellaneous.
2 Composite aircraft
3 Trains.
4 Aircraft, heavier-than-air
5 Airplanes, weight diminished by buoyant gas,
6 Airplane and helicopter sustained
7 Convertible,
8 Airplane and auto-rotating wing sustained.
9 Airplane and paddle wheel sustained,
10 Airplane and cylindrical rotor sustained,
11 Airplane and beating wing sustained.
12 Airplane and fluid sustained,
13 Airplane sustained
14 Aerial torpedoes,
15 Fluid propelled,
16 Glider,
17 Helicopter sustained,
18 Auto-rotating wing sustained,
19 Paddle wheel sustained
20 Feathering,
21 Cylindrical rotor sustained,
22 Beating wing sustained,
23 Fluid sustained.

244. AERONAUTICS—Continued.
24 Aircraft, lighter-than-air
25 Airships with sustaining wings,
26 Airship and helicopter sustained,
27 Airship and paddle wheel sustained,
28 Airship and beating wing sustained,
29 Airship and fluid sustained
30 Airships,
31 Balloons
32 With parachutes,
33 Captive.
34 Aircraft sustentation
35 Sustaining airfoils
36 Lifting fuselages,
37 Lifting struts,
38 Resiliently mounted,
39 Rotatable,
40 Lift modification
41 Special surfaces,
42 Variable
43 Area,
44 Camber,
45 Arrangement
46 Variable
47 Dihedral,
48 Incidence,
49 Folding.
50 Aircraft propulsion and steering on land or water.
51 Aircraft, steering propulsion
52 Fluid.
53 Aircraft power plants
54 Mounting,
55 Arrangement
56 Tilting,
57 Radiator arrangement,
58 Auxiliary,

244. AERONAUTICS—Continued.

Aircraft power plants

59 High altitude,
60 Transmission of power,
61 Power plant using airship gas as fuel.
62 **Aircraft propulsion**
63 Launching,
64 Manual,
65 Screw
66 Tilting,
67 Body encircling,
68 Elongated,
69 Contra-propeller arrangements,
70 Paddle wheel,
71 Reciprocating propeller,
72 Beating wing,
73 Fluid
74 Explosive jet.
75 **Aircraft control**
76 Automatic
77 Electric,
78 Fluid,
79 Gyroscope actuated,
80 Gravity actuated,
81 Operated by landing,
82 Vane operated,
83 Pilot operated
84 Dual,
85 Hydraulic,
86 Rudder bars and pedals,
87 Rudders and empennage
88 Rudders universally mounted,
89 Elevators both front and rear,
90 Ailerons and other roll control devices,
91 Vertical fins,

244. AERONAUTICS—Continued.

Aircraft control

92 Stabilizing propellers,
93 Stabilizing weights
94 Ballast storage and release,
95 Ballast making,
96 Airship control
97 Buoyancy varying,
98 Gas bag inflation,
99 Gas release.
100 **Landing gear**
101 Amphibian,
102 Retractible,
103 Wheel
104 Resiliently mounted,
105 Water landing
106 Flying boat,
107 Emergency,
108 Skids,
109 Tail supports.
110 **Retarding and restraining devices**
111 Wheel brake arrangement,
112 Water brake arrangement,
113 Aerodynamic retarders.
114 **Landing field arrangement**
115 Mooring devices
116 Movable.
117 **Aircraft structure**
118 Special passenger and cargo accommodations,
119 Fuselage and body construction
120 Sectional
121 Shields and other protective devices,
122 Seats and safety belts,
123 Airfoil construction
124 Sectional,

244. AERONAUTICS—Continued.

Aircraft structure

125 Airship hull construction,
126 Airship skin construction,
127 Airship load attachment,
128 Airship gas cell construction and arrangement,
129 Details
130 Aerodynamic resistance reducing,
131 Joints and connections,
132 Skin fastening devices,
133 Materials of construction,
134 Ice prevention,
135 Fuel supply,
136 Material discharging and diffusing,
137 Passenger and cargo loading and discharging in flight.
138 **Safety lowering devices**
139 Entire aircraft,
140 Passenger compartment
141 Seat,
142 Parachutes
143 Garment attached,
144 Aircraft element convertible to parachute,
145 Canopy construction,
146 Inflated bracing,
147 Storage and release
148 Packs,
149 Opening devices,
150 Timing mechanism,
151 Harness,
152 Control devices.
153 **Kites**
154 Airplane type,
155 Accessories.

245 WIRE FABRICS AND STRUCTURE.

1 **Miscellaneous.**
1.5 **Tire-bead grommets.**
2 **Fabrics**
3 Ties and clips,
4 Chain,
5 Interlocking loops,
6 Coil,
7 Hexagonal mesh,
8 Quadrangular mesh,
9 Link,
10 Edges and seams,
11 Slat and wire.

246 RAILWAY SWITCHES AND SIGNALS.

1 **Miscellaneous.**
2 **Train dispatching**
3 Central signal control
4 Cab signal or train control,
5 Selective,
6 Train-order cab signal or train control.
7 Train telegraphy or telephony
8 Inductive,
9 Continuous contacts
10 Traction rail return
11 Multiple contact,
12 Instruments in series,
13 Emergency signal stations,
14 Station, block, or train-order signals
15 Safety systems
16 Holders,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Train dispatching
Station, block, or train-order signals
17 Rotary, vertical axis,
18 Double semaphore.
19 **Staff and tablet systems.**
20 **Block-signal systems**
21 Semiautomatic
22 Electromanual
23 Cab signal or train control,
24 Circuit controllers,
25 Lock and block
26 Track-circuit control,
27 Automatic
28 Electric
29 Radiant energy
30 Hertzian wave,
31 Propulsion-current control
32 Current consumption,
33 Single track.
34 Varying-current track circuit
35 Propulsion-current return
36 Double rail
37 Impedance bond,
38 Wireless distant control,
39 Line-wire distant control,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Block-signal systems
Automatic
Electric
Varying-current track circuit
40 Single block,
41 Direct current, normally closed, track circuit
42 Propulsion current return
43 Varying,
44 Wireless distant control
45 Current reversal,
46 Line-wire distant control
47 Cab signal or train control
48 Bridged insulated rail joint,
49 Intermittent contact
50 Current characteristic,
51 Overlapped blocks,
52 Home and distant,
53 Three position,
54 Single block
55 Cab signal or train control.
56 Intermittent contact,
57 Bridged insulated rail joint,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Block-signal systems
Automatic
Electric
58 Direct-current, normally open, track circuit
59 Cab signal or train control,
60 Distant-signal control,
61 Superimposed propulsion current,
62 Cab signal or train control
63 Inductive,
64 Train-carried current supply
65 Multiple continuous contacts
66 Sectional,
67 Single continuous contact
68 Sectional,
69 Intermittent contact
70 Rail circuit,
71 Rail return,
72 Propulsion-current signaling
73 Continuous contact,
74 Intermittent contact,
75 Bridged insulated rail joint,
76 Track trip,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Block-signal systems—Continued.
Automatic
Electric
77 Counting in and out
78 Ratchet wheel
79 Double opposed pawls
80 Parallel teeth,
81 Propulsion-current signaling
82 Rotary controller,
83 Car-actuated controller
84 Trolley or plow,
85 Intermittent contact,
86 Train-carried current supply,
87 Line-current supply
88 Intermediate signal,
89 Short sectional rail closure,
90 Car-actuated controller
91 Relay,
92 Intermittent contact,
93 Combined fluid pressure and electric
94 Cab signal or train control,
95 Track-circuit control,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Block-signal systems
Automatic
96 Electromechanical
97 Cab signal or train control,
98 Track-circuit control,
99 Clockwork,
100 Fluid pressure
101 Cab signal or train control,
102 Mechanical
103 Cab signal or train control,
104 Manual
105 Electric
106 Lock and block,
107 Recorders.
108 **Time indication, automatic**
109 Flow retarded,
110 Time limit expired.
111 **Grade-crossing track protection**
112 Semiautomatic,
113 Automatic
114 Electric
115 Cab signal or train control,
116 Fluid pressure,
117 Cab signal or train control.
118 **Drawbridge protection**
119 Cab signal or train control.
120 **Roadway-defect protection**
121 Electric.
122 **Train-position indication**
123 Automatic time recording,
124 Train annunciators or indicators.
125 **Electric automatic highway signals, mine doors, and gates**
126 Car actuated controller,
127 Gates and doors,
128 Normally open track circuit
129 Short sectional rail closure,
130 Normally closed track circuit.

246. RAILWAY SWITCHES AND SIGNALS—Continued.

131 **Interlocking**
132 Electric actuation
133 Electric locking
134 Route locking
135 Return-release indication,
136 Mechanical locking
137 Return-release indication
138 Locked slide,
139 Fluid-pressure actuation
140 Electrically controlled valve
141 Return-release indication,
142 Return-release indication,
143 Manual actuation
Switch stands
144 Signal-actuating
145 Double lever,
146 Electrical locking.
147 Mechanical locking
148 Preliminary
149 Tappets,
150 Tappets,
151 Dectector bars,
152 Compensators
153 Counterweight
154 Intermittent grip,
155 Rod-saving devices
156 Selectors
157 Electric,
158 Switch and lock movements,
159 Detached locking, check locking, or key control,
160 Approach locking,
161 Retarded-release mechanism,
162 Switch or signal indicators,
163 Derails.
164 **Slotting and control**
165 Electric.
166 **Pilot or signal cars.**

246. RAILWAY SWITCHES AND SIGNALS—Continued.

167 **Cab signal or train control**
168 Train parting,
169 Train defect,
170 Derailment
171 Contact trips
172 Frangible,
173 Inertia trips,
174 Highway or station, automatic
175 Code signal,
176 Switch signals,
177 Block entrance initiated
178 Electric or magnetic control
179 Bridged insulated rail joint,
180 Cab-circuit controller,
181 Mechanical actuation,
182 Speed-control systems,
183 Manual-control systems,
184 Service stop,
185 Recording devices,
186 Motive-power control
187 Electric,
188 Fluid-pressure-actuated throttle,
189 Engineer's-brake-valve actuation,
190 Train-pipe-valve structure,
191 Visual cab signals,
192 Train mechanism
193 Electric or magnetic
194 Inductive,
195 Intermittent contact,
196 Cab circuit controller
197 Magnetically actuated,
198 Single-direction actuation,
199 Frangible,
200 Lever actuated,
201 Track trips
202 Electric or magnetic,
203 Pivoted,
204 Vertical motion,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Cab signal or train control
Track trips
205 Lateral motion,
206 Fixed,
207 Portable.
208 **Car-displayed crossing signals.**
209 **Passengers' station signals.**
210 **Torpedo mechanism**
211 Electric,
212 Magazine
213 Vertical,
214 Rotary,
215 Car attached,
216 Hand placing devices.
217 **Audible switch and signal indicators.**
218 **Electric actuation**
219 Control circuits,
220 Switch signals,
221 Motor systems
222 Return-indication-current generation,
223 Three-position signals,
224 Home and distant signals,
225 Reciprocating armature
226 Controller-actuated switches
227 Opposed magnets
228 Circuit changers,
229 Tandem contacts,
230 Alternate throw,
231 Opposed magnets
232 Circuit changers,
233 Tandem contacts, switches,
234 Parallel contacts, switches
235 Circuit controller,
236 Alternate throw,
237 Fly-back
238 Latch or clutch release,
239 Switches,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Electric actuation
Motor systems
240 Rotary armature
241 Opposed motors,
242 Circuit changers,
243 Fly-back
244 Latch or clutch release,
245 Car-actuated generators,
246 Car-actuated circuit controllers
247 Wheel or train counting,
248 Retarded action,
249 Electric or magnetic,
250 Single-direction actuation,
251 Vertically sprung rail,
252 Trolley or plow actuated,
253 Switch or signal actuated controllers,
254 Trolley-completed circuits,
255 Car-wheel-completed circuits,
256 Relays.
257 **Fluid-motor actuation**
258 Electric control
259 Car-controlled switches,
260 Signals,
261 Gates.
262 **Mechanical-motor actuation**
263 Electric control.
264 **Point throwers**
265 Magnetic,
266 Modified switch
267 Directing-grooves,
268 Wedging wheel,
269 Sliding shoe.
270 **Vehicle-energy actuation**
271 Fluid transmission
272 Gates,
273 Continuous-rail crossings,
274 Switch-connected frogs,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Vehicle-energy actuation
275 Continuous-rail frogs
276 Spring rail,
277 Automatic turnouts,
Switch stands, automatic—
278 Facing setting
279 Manual control,
280 Resetting
281 Vehicle restrained,
282 Trailing setting
283 Yielding rail,
284 Trailing setting
285 Yielding rail
286 Spring-clutch
287 Coaxial spring,
288 Counterweight,
289 Frangible,
290 Trailing fly-back
291 Spring actuated,
292 Signals and gates, automatic
293 Highway crossing
294 Visual and audible,
295 Audible
296 Bells, single stroke,
297 Track mechanism
298 Single direction,
299 Latch or clutch release
300 Electric,
301 Longitudinal motion,
302 Vertical motion,
303 Longitudinal spiral cam,
304 Vehicle-restrained gates and doors
305 Parallel swing,
306 Longitudinal motion,
307 Vertical motion
308 Swinging
309 Yielding rail,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Vehicle-energy actuation
Signals and gates, automatic
Track mechanism
310 Parallel swing,
311 Longitudinal motion
312 Rectilinear,
313 Vertical motion,
314 Switches, automatic
315 Resetting, vehicle restrained,
316 Wheel resetting,
317 Facing setting,
318 Trailing setting,
319 Trailing fly-back
320 Spiral spring
321 Tie or connecting rod,
322 Track mechanism
323 Selective,
324 Latch or clutch release
325 Electric control,
326 Electric control,
327 Alternate throw
328 Tappet wheel,
329 Three and multiple throw,
330 Traffic protected,
331 Rotary longitudinal connecting shaft,
332 Cable and pulley connection,
333 Longitudinal spiral cam,
334 Rack and pinion,
335 Bow spring,
336 Longitudinal motion
337 Train-trip elevation,
338 Track-mechanism depression,
339 Perpendicular swing
340 Double,
341 Horizontal swing
342 Double acting,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Vehicle-energy actuation
Switches, automatic
Track mechanism
Longitudinal motion
Horizontal swing
343 Double,
344 Transverse motion
345 Duplex lever,
346 Swinging
347 Double acting
348 Guiding tail,
349 Double,
350 Double acting,
351 Vertical motion
352 Duplex lever,
353 Swinging
354 Double acting,
355 Double,
356 Double
357 Transverse lever connection,
358 Switch locks, automatic,
359 Train trips
360 Electric or magnetic,
361 Fluid pressure,
362 Resilient,
363 Hooks,
364 Racks or friction bars,
365 Pivoted
366 Wheel,
367 Rod,
368 Vertical motion
369 Wheel,
370 Rod,
371 Lateral motion
372 Wheel,
373 Rod.
374 **Safety sidings.**

246. RAILWAY SWITCHES AND SIGNALS—Continued.

375 **Continuous-rail crossings**
376 Overlapped main,
377 Pivoted rail,
378 Rotary block,
379 Movable point,
380 Sliding rail
381 Longitudinal.
382 **Switch-connected frogs**
383 Overlapped main
384 Double rail,
385 Swinging tongue
386 Stub end
387 End-pivoted rail,
388 Center-pivoted rail,
389 Swinging rail
390 Opposed swing,
391 Wing,
392 Transversely sliding rail.
393 **Switch stands**
394 Cab signal or train control,
395 Resetting
396 Latch release, automatic,
397 Hand restrained,
398 Vehicle restrained,
399 Detention devices,
400 Key retaining,
401 Rail lock and position indication
402 Transverse rotary locking shaft,
403 Three and multiple throw,
404 Adjustable throw,
405 Spiral-cam actuated.
406 Gear actuated,
407 Structural types
408 Depressed mechanism,
409 High semaphore stands,
410 Vertical lever
411 Ground stands,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Switch stands
Structural types
412 Horizontal lever
413 Drop arm
414 Automatic key lock.
415 **Switches**
416 Slip,
417 Frog obviating
418 Single rail,
419 Conduit, third rail, or trolley,
420 Nonderailing, trailing
421 Risers,
422 Moving guard rail,
423 Facing, rerailing,
424 Facing, selective
425 Side draft,
426 Modified wheel,
427 Stationary turnout,
428 Snow protected,
429 Overlap,
430 Sliding,
431 Oscillating, longitudinal axis,
432 Risers,
433 Vertical motion,
434 Flexible rail,
435 Point
436 Recessed rail,
437 Renewable and reenforced,
438 Point and mate,
439 Tandem,
440 Three throw,
441 Tread guard rail,
442 Tongue
443 Bed lock,
444 Self-cleaning,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Switches
445 Stub
446 Double rail,
447 Anti creep or jar,
448 Lock,
449 Tie bars
450 Adjustable
451 Eccentric,
452 Connecting rods,
453 Chairs and plates.
454 **Crossings, frogs, and mates**
455 Outer-tread-supported wheel,
456 Tread guard rail,
457 Flange-supported wheel
458 Frogs,
459 Hot filled,
460 Central inserts
461 Cast bound,
462 Plate or plate bolted,
463 Bolted,
464 Solid,
465 Crossings
466 Street and steam,
467 Chairs,
468 Frogs
469 Unbroken main,
470 Clamped,
471 Composite,
472 Details.
473 **Signals**
474 Track reflectors,
475 Dwarf or pot,
476 Switch or switch stand,
477 Roadway, visual and portable,
478 Inclosed,
479 Semaphore
480 Upper quadrant,

246. RAILWAY SWITCHES AND SIGNALS—Continued.

Signals
Semaphore
481 Home and distant,
482 Arms
483 Illuminated,
484 Lamp and spectacles,
485 Post mechanism,
486 Bridge warnings,
487 Torpedoes,
488 Trainmen's kits.
489 **Manual actuation**

247 NO CLASS.

248 SUPPORTS.

1 **Miscellaneous**
2 **Machinery supports**
3 Vehicle motor
4 Outboard motor,
5 Aeroplane motor,
6 Flexible
7 For oscillation on longitudinal axis,
8 Resilient
9 Nonmetallic resilient element
10 Shear stress type,
11 Projection machine,
12 Stand or bracket alternative,
13 Stands,
14 Bracket
15 Vibration dampening,
16 Adjustable,
17 Suspended
18 Vibration dampening,
19 Bases
20 Vibration dampening
21 Metallic and nonmetallic resilient element,
22 Nonmetallic resilient element,
23 Adjustable,
24 Resilient foot,
25 Hold down,
26 For oscillating on longitudinal axis.
27 **Instrument in panel.**
27.5 **Washboard type.**
28 **Picture type**
29 Suspended
30 Plaque holders,
31 Adjustable,
32 Cord retainers,
33 Stands,

248. SUPPORTS—Continued.

Picture type
34 Easels
35 Of sheet material.
36 Of wire,
37 Props.
38 **Staff type**
39 Plural staff,
40 Bracket
41 Double clamp,
42 Inclined staff,
43 Vertical staff,
44 Stand or base
45 Rotatable staff,
46 Folding
47 Gripping leg,
48 Knockdown.
48.1 **Eaves trough**
48.2 Wall bracket.
49 **Pipe or cable**
50 Neon tube,
51 Tool cord or tube
52 Tool attached,
53 Train coupling type,
54 Resilient,
55 Antifriction element,
56 Extending through plate
57 Interjoist.
58 Suspended
59 Adjustable vertically,
60 Flexible,
61 From overhead or messenger cable,
62 Pipe rings or clamps,
63 Cable suspension clamps
64 Automatically releasing,
65 Brackets
66 Road guard,
67 Angle cock type,
67.5 Divided knob or cleat,
67.7 Double arm,

248. SUPPORTS—Continued.

Pipe or cable
Brackets
68 Plural pipe or cable
69 With bridle ring,
70 Adjustable,
71 With support penetrating means,
72 Beam clamped,
73 Interlocked bracket and support,
74 With ring or clamp,
75 **Hose and/or nozzle type**
76 Hand, ground and ladder supported,
77 Ladder attached
78 With carrier,
79 Receptacle attached,
80 Stands
81 Pivoted standard,
82 Swinging clamp,
83 Plural leg
84 Swinging clamp,
85 Ground inserted
86 Swinging clamp,
87 Ground inserted
88 Swinging clamp,
89 Racks
90 Folded hose
91 Link supported
92 Swinging or folding link
93 Simultaneously movable.
94 **Strainer or funnel type.**
95 **Bag holders**
96 Golf bag,
97 Stands
98 Wheeled,
99 Mouth holding frames
100 Prong or hook type.
101 With clamp.
102 **Nursing bottle type**

248. SUPPORTS—Continued.

Nursing bottle type
103 Bracket
104 Flexible,
105 Stands
106 Adjustable,
107 Of wire.
108 **Paste-tube type**
109 Stands.
110 **Brush and broom**
111 Socket type
112 Of wire,
113 Clasp type.
114 **Watch and clock**
115 Brackets,
116 Stands,
117 Easels.
117.1 **Flatiron**
117.2 Stand or base
117.3 Insulated
117.4 With clamp or hold-down,
117.5 Inverted,
117.6 With clamp or hold-down,
117.7 With clamp or hold-down.
118 **Arm rest.**
119 **Shipping supports.**
120 **Portable platforms for lift trucks.**
121 **Stand and bracket**
122 Adjustable bracket
123 Counterbalanced,
124 Vertically and horizontally,
125 Vertically.
126 **Stand or bracket alternative.**
127 **Stands**
Receptacle
128 Movable receptacle
129 Wheeled,
130 Rotating, horizontal axis,
131 Rotating, vertical axis,
132 Vertically,

248. **SUPPORTS**—Continued.

Stands

Receptacle
Movable receptacle
133 Tilting
134 Closure operating,
135 Casing and support convertible,
136 With foldable stand,
137 With axis intersecting receptacle,
138 Double horizontal axis,
139 Tilting cradle
140 With tilting or latch means,
141 Axis intersecting receptacle
142 With tilting or latch means,
143 Rocker stand,
144 Swinging base,
145 Swinging about a vertical standard,
146 Stationary receptacle
147 With closure operator,
148 For sloping surface,
149 Adjustable,
150 Knockdown or folding,
151 Attached and detachable legs,
152 Of sheet material,
153 Of wire,
154 With clamp or hold-down,
155 Convertible to cane,
156 Ground inserted,
157 Adjustable vertically,
158 Standard type
159 Sectional,
160 Flexible,
161 Adjustable vertically
162 Counterbalanced,
163 Plural leg
164 Crossed legs,

248. **SUPPORTS**—Continued.

Stands

Plural leg
165 Knock-down,
166 Folding
167 Vertical pivots,
168 Legs pivoted to head
169 Simultaneously movable,
170 Legs pivoted to standard
171 Simultaneously movable,
172 Adjustable for various sized articles
173 Pivoted legs,
174 Of sheet material,
175 Of wire,
176 Article support
177 Heads
178 Adjustable
179 Universally
180 Leveling means,
181 Ball and socket
182 Self leveling,
183 On vertical and horizontal axis,
184 On double horizontal axis
185 On single horizontal axis,
186 On vertical axis,
187 Article attaching means,
188 Leg attaching connections,
189 Legs
190 Folding,
191 Telescoping,
192 Braces,
193 Feet,
194 Bases.
195 **Easels**
196 Receptacle,
197 Plural leg,
198 Of sheet material,
199 Of wire.

248. **SUPPORTS**—Continued.

200 **Brackets**
201 Plural, for single article
202 For swinging receptacle,
203 With anti-theft means,
204 Resilient,
205 Specially mounted or attached
206 Vacuum or magnet,
207 Vertically or horizontally,
208 Window
209 Radiator bracket,
210 Ladder
211 Hook type,
212 Faucet
213 Hook type,
214 On horizontal rod or bar
215 Hook type,
216 By support-penetrating means
217 Hook type
218 Pivoted or folding,
219 Of wire
220 Single piece,
220.5 With retainer,
221 Post or column attached,
222 Corner,
223 By interlocked bracket and support
224 Vertical movement engaged,
225 Horizontal movement engaged,
226 Clamped to support
227 Hook type,
228 Beam clamped,
229 With article clamp,
230 Cylindrical support
231 Flexible clamping band,
232 Radiator
233 Suspended radiator,
234 With rod supported hook,
235 Shelf or scaffold type
236 Window supported,

248. **SUPPORTS**—Continued.

Brackets

Shelf or scaffold type
237 Roof supported,
238 Ladder supported,
239 Projecting pin type,
240 Swinging or folding,
241 Adjustable
242 To vary shelf angle,
243 Vertically
244 Sliding
245 Clamping
246 Self acting,
247 Of sheet material
248 Single blank,
249 Of wire,
250 Shelf holding means,
251 Rod type
252 Combined curtain rod and shade roller
253 Plural rod,
254 Independent bracket
255 Plural rod
256 Adjustable,
257 Adjustable
258 In two directions,
259 Laterally
260 Step by step,
261 Curtain rod
262 Independent bracket
263 Plural rod,
264 Mounted on opposing walls,
265 Adjustable,
266 Shade roller type
267 Independent bracket
268 Mounted on opposing walls,
269 Adjustable
270 In two directions,
271 Laterally
272 Step by step,

248. SUPPORTS—Continued.
Brackets
Rod type
273 Awning head rod,
274 Adjustable
275 With energy cut-off,
276 Plural joint
277 Lazy-tong type,
278 Vertical and horizontal pivots
279 With sliding joints,
280 Counterbalanced,
281 With parallel arms,
282 Vertical pivots
283 With vertical adjustment,
284 Horizontal pivots,
285 Single vertical pivot and sliding joints,
286 Single horizontal pivot and sliding joints,
287 Horizontally and vertically sliding joints,
288 Single joint
289 Vertical pivot
290 Hook type,
291 Horizontal pivot
292 Counterbalanced,
293 Retractable,
294 Hook type,
295 Vertically sliding
296 And rotatable,
297 Counterbalanced,
298 Horizontally sliding,
299 In arcuate path,
300 Of sheet material
301 Hook type,
302 Of wire
303 Hook type,
304 Hook type
305 Article clasping,
306 Article releasing,

248. SUPPORTS—Continued.
Brackets
Hook type
307 Slidable,
308 Foldable,
309 Article holding means
310 Base engaging,
311 Receptacle type
312 Neck engaging,
313 Clamp,
314 Socket,
315 Ring,
316 Clamps,
317 **Suspended supports**
318 Receptacle or bowl,
319 With energy cut-off,
320 Releasable for lowering
321 Clutch type,
322 Hook type,
323 Adjustable
324 Pivoted parts
325 Weight counterbalance,
326 With telescoping tubes,
327 Vertically
328 Cord supported
329 Reel
330 Spring,
331 With counterweight.
332 Pulley brackets,
333 Telescoping tubes
334 Spring reel counterbalanced
335 With clutch in tubes,
336 Clutch
337 Friction,
338 Rotary brake,
339 Hook type
340 Bar supported,
341 Swinging,
342 Fittings
343 Ceiling attachments,

248. SUPPORTS—Continued.
Suspended supports
Fittings
344 Center-piece attachments.
345 **Canopies.**
346 **Supporting bases**
347 Signal rod,
348 Radiator,
349 Rotatable,
350 Resilient.
351 **Props and braces**
352 Automobile,
353 Clothesline,
354 Adjustable
355 Clutch type,
356 Yieldable,
357 Heads and bases.
358 **Vibration dampening.**
359 **Article carried**
360 Bracket type.
361 **Holddown**
362 Vacuum.
363 **Vacuum.**
364 **Counterbalance weights.**

249 AUTOMATIC WEIGHERS.

1 **Miscellaneous.**
2 **Special types**
3 Material
4 Fibrous,
5 Dough,
6 Overload
7 Power,
8 Auxiliary chamber,
9 Catch pan,
10 Feed-controlling float,
11 Shifting weight
12 Alternating,
13 Stationary chamber,
14 Plural material,
15 Initial partial charge.
16 **Discharging**
17 Filling
18 Receptacle feed,
19 Rotary
20 Power,
22 Multiple,
23 Alternating
24 Regulator
25 Oscillating chamber,
26 Separate weigh chamber
27 Oscillating feed guide
28 Pouring discharge,
29 Divided weigh chamber
30 Feed cut-off,
31 Oscillating partition,
32 Oscillating feed guide,
33 Oscillating
34 Shearing discharge cut-off,
35 Pouring discharge,

249. AUTOMATIC WEIGHERS—Con.
Discharging
Single
36 Regulator
37 Power,
38 Intercontrol of feed and discharge
39 Single feed cut-off,
40 Plural feed stream,
41 Cooperating feed cut-offs,
42 Power and feed cut-off
43 Plural feed stream,
44 Cooperating feed cut-offs,
45 Power,
46 Power cut-off
47 Cooperating feed cut-offs,
48 Plural feed stream,
49 Cooperating feed cut-offs
50 Intercontrol of feed and discharge,
51 Oscillating weigh chamber,
52 Single feed cut-off
53 Intercontrol of feed and discharge,
54 Oscillating weigh chamber.
55 **Removable weigh chamber**
56 Alternating
57 Oscillating feed guide,
58 Single
59 Receptacle feed,
60 Power and feed cut-off
61 Cooperating feed cut-offs,
62 Power,
63 Power cut-off
64 Cooperating feed cut-offs,
65 Plural feed stream,
66 Cooperating feed cut-offs.

250 RADIANT ENERGY.

1 **Miscellaneous.**
2 **Teledynamic**
3 Earth transmission
4 Telephony,
5 Telegraphy,
6 Radiotelephony
7 By light waves,
8 Radiotelegraphy
9 Multiplex,
10 Cooperative wave,
11 Directive,
12 Group frequency,
13 Complete station,
14 Portable sets,
15 Repeaters,
16 Apparatus
17 Transmitters
18 Sustained oscillation,
19 Controllers,
20 Receivers
21 Detectors
22 Electrodynamic,
23 Electrolytic,
24 Magnetic,
25 Thermal,
26 Thermoelectric,
27 Gaseous element,
28 Liquid element
29 Capillary,
30 Solid element
31 Crystal,
32 Granular,
33 Antennae.
36 **Oscillation circuits**
37 Disruptive discharge
38 Spark gap.
39 **Wave meters.**

250. RADIANT ENERGY—Continued.
40 **Tuners.**
41.5 **Light sensitive circuits.**
42 **Ray energy**
43 Fluent material treating
44 With radio-active material,
45 With control means,
46 With movable and/or fluent stream agitator,
47 With temperature modifier,
48 Tortuous path,
49 Film type,
50 With article or object support
51 Inanimate, article or object
52 With relatively movable article and ray generator,
53 With ray sensitive film or screen,
54 Tables
55 Tiltable
56 Parallel mounted tube
57 With film or screen support,
58 With film or screen support,
59 Object measurement,
60 Stereoscopy
61 With single ray source,
61.5 Angularly related beam localizing type,
62 With secondary ray screen or grid
63 Screens and grids,
64 With angle indicator,
65 Photography
66 Film or plate changers,
67 Exposure identification,
68 Cassettes
69 Dental
70 Supports,
71 Fluorescent and phosphorescent devices

250. RADIANT ENERGY—Continued.
Ray energy
Fluorescent and phosphorescent devices
72 Indicating instrument,
73 Pendants,
74 Handles and keys,
75 Push buttons, screws, nails, and other rod-like bodies,
76 Face plates,
77 With reflector or refractor,
78 With hood,
79 With support,
80 Screens,
81 Materials
82 With radio-active material,
83 Detection and measurement of special rays,
84 Ray generation
85 Combined with heat generator,
86 With ray filter,
87 Discharge device and transformer units,
88 With casing or reflector
89 With cooling means,
90 X-ray generator,
91 With supports
92 Stand and bracket,
93 X-ray electrical systems
94 Plural devices,
95 With discharge quantity determining means,
96 With gas pressure regulation,
97 With constant discharge rate,
98 With condensor discharge,
99 With electron stream control device,
100 With rectifying circuit
101 With mechanical rectifier,
102 With A. C. or pulsating supply,

250. RADIANT ENERGY—Continued,
Ray energy.
Ray generation
X-ray electrical systems
103 With voltage or current regulator,
104 Conductor systems,
105 Cones and shutters,
106 Radio-active applications
107 Compositions,
108 Shields and shielding materials.
27.5 Tubes
141 Cathode ray
142 X-ray
143 With cooling means,
144 With plural cathodes and/or anodes,
145 With focusing means,
146 With potential stress distributing means,
147 With secondary ray screen,
148 With movable electrode,
149 Targets or anti-cathodes,
150 With plural cathodes,
151 With plural output electrodes
152 Three or more,
153 With photo-sensitive electrode,
154 With electron permeable window,
155 With plural accelerating electrodes,
156 With stream deflecting means
157 Plural
158 Electrostatic,
159 Electrostatic,
160 With stream concentrator
161 Magnetic,
162 Tube or disk,
163 With stream modulator,
164 Screens and targets,

250. RADIANT ENERGY—Continued.
Tubes.
165 Photo-sensitive
166 With plural cathodes
167 Mosaic type,
168 With plural anodes,
169 With discharge control device
170 Photo-sensitive control of control device,
171 With gas or vapor,
172 Special ray sensitive,
173 Cathode on tube wall,
174 Secondary emitters
175 With plural secondary emitters,
176 Secondary emission prevention
177 With non-emissive material.

251 VALVES.

1 Convertible stop and nonstop.
2 Combined stop and nonstop.
3 Spring.
4 Combined reciprocating and rotating.
5 Tube compressors.
6 Locking
7 Tank.
8 Valve-body operated
9 Rotary.
10 Pivoted
11 Butterfly
12 Hollow,
13 Alternately seated
14 Butterfly,
15 Curtain type,
16 Geared,
17 Reciprocating stem,
18 Gate
19 Terminal.
20 Reciprocating
21 Liquid transfer,
22 Alternately seated
23 Stop and waste,
24 Diaphragm type,
25 Disk or plug
26 Trigger release,
27 Heads and faces
28 Antiscoring,
29 Cleaning,
30 Packless stem
31 Diaphragm sealed,
32 Valve sealed,
33 Suction drained,
34 Graduated port,
35 Screw seated,
36 Regrinding
37 Concentric stem,
38 Spring pressed,

251. VALVES—Continued.

Reciprocating
Disk or plug
39 Cam actuated
40 Packed,
41 Lever actuated,
42 Gear actuated
43 Screw actuated
44 Co-operating head and stem,
45 Cooperating handle and stem,
46 Swiveled head,
47 Nonrising stem
48 Packed,
49 Bonnet structure,
50 Packed,
51 Gate
52 Lever actuated
53 Terminal,
54 Gear actuated,
55 Screw actuated,
56 Thrust opposing
57 Nonrising stem,
58 Swiveled head,
59 Multifaced
60 Lever actuated,
61 Screw actuated
62 Nonrising stem,
63 Swiveled head,
63.5 Laterally expanding
64 Cam actuated,
65 Fluid pressure,
66 Screw,
67 Toggle,
68 Wedge
69 Swiveled head,
70 Gate carrying
71 Nonrising screw,
72 Swiveled head,
73 Multiway
74 Supply and exhaust,

251. VALVES—Continued.

Reciprocating
75 Piston
76 Multiway,
77 Screw actuated,
78 Tubular
79 Liquid seal,
80 Screw actuated.
81 Spool type
82 Compensated,
83 Lever actuated.
84 Rotary disk
85 Balanced,
86 Graduated ports,
Multiway
87 Alternately seated,
88 Mixing,
89 Stop and waste,
90 Spring pressed.
91 Rotary plug
92 Graduated ports,
93 Lubricating,
94 Drain,
95 Axial and radial bore,
96 Shell or skeleton,
97 Axially moving,
98 Balanced,
99 Handles, safety
100 Removable,
101 Heads
102 Sectional,
103 Packed,
104 Multiconduit,
105 Multiway
106 Mixing,
107 Distributing,
108 Four way,
109 Three way
110 Stop and vent
111 Reversible,

251. VALVES—Continued.

Rotary plug
112 Spring pressed,
113 Seats.
114 Nonstop valves
115 Valve-body operated,
116 Receptacle operated
117 Attachments,
118 Alternately seated,
119 Diaphragm,
120 Leak valves,
121 Ball,
122 Collapsible,
123 Pivoted
124 Dash-pot controlled.
125 Supplemental operator
126 Weight,
127 Reciprocating disk or plug
128 Dash-pot controlled,
129 Current rotating,
130 Supplemental operator
131 Cam
132 Spring,
133 Lever
134 Spring,
135 Push or pull button
136 Dash-pot controlled,
137 Spring
138 Dash-pot controlled,
139 Screw
140 Opening,
141 Spring,
142 Dash-pot controlled,
143 Dash-pot controlled,
144 Spring actuated
145 Adjustable,
146 Dash-pot controlled,
147 Weight actuated
148 Adjustable,
149 Rotary.

251. VALVES—Continued.

150 Handles and stems.
152 Stops
153 Handle,
154 Stem.
155 Bodies
156 Sectional
157 Adjustable.
158 Materials.
159 Heads
160 Disks
161 Reenforced,
162 Plugs,
163 Holding devices
164 Latches
165 Handle operated,
166 Attachments.
167 Seats
168 Blast.

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1 **Miscellaneous.**
2 **Fire-extinguishive**
3 Foam or gas phase containing,
4 Gas generative, chemically
5 Dry, combustion type,
6 Low temperature chemically interreactive
6.5 Foam-stabilizant or colloid-stabilizant containing,
7 Carbonates or NH_4 salts containing or pyrolytic,
8 Volatile or gas-charged liquids containing,
8.05 Foam-stabilizant or colloid-stabilizant containing.
8.1 **Fireproofing.**
8.5 **Earth boring.**
8.55 **Well treating.**
8.6 **Textile treating.**
8.7 Organic sulphoxy compound containing
8.75 Organic amine or amide containing,
8.8 Organic amine or amide containing,
8.9 Ether group containing.
9 **Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions**
10 Packages or heterogeneous arrangements,
11 Lubricating and foreign functions,
12 Rigid forms,
13 With fibrous carriers
14 Organic carrier components,
15 Gas charged,
16 Solid-phase non-soap-forming inorganic or non-low-fusing components
17 Soaps, organic-acid salts or soap-forming components containing
18 Inorganic compounds or elements containing (except water)
19 Free solid-phase metal containing,
20 Carbon, silica, or silicates and solid S, Se, or Te containing,

252. COMPOSITIONS—Continued.

Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions

Solid-phase non-soap-forming inorganic or non-low-fusing components
Soaps, organic-acid salts or soap-forming components containing
Inorganic compounds, or elements containing (except water)
21 Carbon, silica, or silicates containing
22 Graphite or carbon containing
23 With other inorganic components (except water),
24 Solid-phase S, Se, or Te containing,
25 Inorganic compounds or elements containing (except water)
26 Free solid-phase metal containing,
27 Carbon, silica, or silicates and solid S, Se, or Te containing,
28 Carbon, silica, or silicates containing
29 Graphite or carbon containing
30 With other inorganic components (except water),
31 Solid-phase S, Se, or Te containing,
32 Soaps, organic-acid salts or soap-forming components containing
33 Sulpho-soaps or sulpho-organic acid salts containing,
34 Ammonia or nitrogen-base organic-acid salts containing,
35 Aluminum or heavy-metal organic-acid salts containing
36 With alkaline earth or alkali-metal salts,
37 With rubber, solid terpenes or derivatives, or non-hydrocarbons,

252. COMPOSITIONS—Continued.

Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions

Soaps, organic-acid salts or soap-forming components containing
38 Alkaline-earth or alkali-metal organic-acid salts containing
39 Alkaline-earth-metal salts containing
40 With alkali-metal salts,
41 Alkali-metal salts containing
42 With rubber, solid terpenes or derivatives, or non-hydrocarbons,
43 Rubber, solid terpenes, or derivatives containing,
44 Non-hydrocarbon components containing
45 S, Se, or Te organic compounds or solutions containing
46 With elements other than S, C, and H (except water)
47 Nitrogen compound containing,
48 With elements other than S, C, H, O, and N,
49 Aqueous or inorganic components
49.3 Aqueous
49.5 Emulsion or colloidal dispersion containing,
50 Nitrogen organic compound containing
51 With elements other than N, C, and H,
52 Oxygen organic compound containing
53 With elements other than C, H, and O
54 Halogen compound containing,
55 Artificially-oxidized hydrocarbons or derivatives containing,
56 Carboxylic acid or ester containing
57 Carbocyclic or non-aliphatic compounds containing,
58 Halogen organic compound containing,
59 Hydrocarbon containing.
60 **Physical separation agents**
61 Froth-flotation or differential adherence.
62 **Heat or sound insulating.**

1 Miscellaneous
2 Fire-extinguishive
3 Foam or gas phase containing
4 Gas generative, chemically
5 Dry, combustion type
6 Low temperature chemically interreactive
6.5 Foam-stabilizant or colloid-stabilizant containing
7 Carbonates or NH_4 salts containing or pyrolytic
8 Volatile or gas-charged liquids containing
8.05 Foam-stabilizant or colloid-stabilizant containing
8.1 Fireproofing
8.5 Earth boring
8.55 Well treating
8.57 Leather or fur treating
8.6 Textile treating
8.7 Organic sulphoxy compound containing
8.75 Organic amine or amide containing
8.8 Organic amine or amide containing
8.9 Ether group containing
9 Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions
10 Packages or heterogeneous arrangements
11 Lubricating and foreign functions
12 Rigid forms
13 With fibrous carriers
14 Organic carrier components
15 Gas charged
16 Solid-phase non-soap-forming inorganic or non-low-fusing components
17 Soaps, organic-acid salts or soap-forming components containing
18 Inorganic compounds or elements containing (except water)
19 Free solid-phase metal containing
20 Carbon, silica, or silicates and solid S, Se, or Te containing
21 Carbon, silica, or silicates containing
22 Graphite or carbon containing
23 With other inorganic components (except water)

Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions
Solid-phase non-soap-forming inorganic or non-low-fusing components
Soaps, organic-acid salts or soap-forming components containing
Inorganic compounds or elements containing (except water)
24 Solid-phase S, Se, or Te containing
25 Inorganic compounds or elements containing (except water)
26 Free solid-phase metal containing
27 Carbon, silica, or silicates and solid S, Se, or Te containing
28 Carbon, silica, or silicates containing
29 Graphite or carbon containing
30 With other inorganic components (except water)
31 Solid-phase S, Se, or Te containing
32 Soaps, or organic-acid salts containing
32.5 Phosphorus-containing-organic-acid salts containing
32.7 S, Se, or Te containing
33 Sulpho-organic-acid salts containing
33.2 With salts of other organic acids
33.3 With rubber, solid terpenes or derivatives or other non-hydrocarbons
33.4 With rubber, solid terpenes or derivatives or other non-hydrocarbons
33.6 Salts of organic acids of other than C, H, and O, containing
34 Ammonia or nitrogen-base organic-acid salts containing
34.7 With rubber, solid terpenes or derivatives or other non-hydrocarbons
35 Aluminum or heavy-metal organic-acid salts containing
36 With alkaline-earth or alkali metal organic-acid salts

Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions
Soaps, or organic-acid salts containing
Aluminum or heavy-metal organic-acid salts containing
37 With rubber, solid terpenes or derivatives or other non-hydrocarbons
37.2 Inorganic components, rubber or compounds of other than C, H, and O
37.5 Aromatic- or carbocyclic-acid salts containing
37.7 Aromatic- or carbocyclic-acid salts containing
38 Alkaline-earth or alkali metal organic-acid salts containing
39 Alkaline-earth metal organic-acid salts containing
40 With alkali metal organic-acid salts
40.5 With rubber, solid terpenes or derivatives or other non-hydrocarbons
40.7 Inorganic components, rubber, or compounds of other than C, H, and O
41 Alkali-metal organic-acid salts containing
42 With rubber, solid terpenes or derivatives or other non-hydrocarbons
42.1 Inorganic components, rubber or compounds of other than C, H, and O
42.4 With rubber, solid terpenes or derivatives or other non-hydrocarbons
42.7 Metal or base, linked by O, S, Se, or Te to carbon of organic radical compounds containing
43 Rubber, solid terpenes or derivatives containing
45 S, Se, or Te, organic compounds or solutions containing
46.3 Inorganic components or elements (except S) or compounds of other than C, H, O, S, N and halogen containing
46.4 Metals or metal compounds containing
46.6 Phosphorus or phosphorus compounds containing
46.7 Se, Te, N, halogen or other than C, H, O, S, and P containing

Lubricants or separatants for moving solid surfaces and miscellaneous mineral oil compositions
S, Se, or Te, organic compounds or solutions containing
47 Nitrogen compounds containing
47.5 Oxygen, halogen or other than C, H, S, and N compounds containing
48.2 Oxygen compounds containing
48.4 Halogen or other than C, H, S, and O compounds containing
48.6 Carboxyl compounds containing
48.8 Halogen compounds containing
49 Aqueous or inorganic components
49.3 Aqueous
49.5 Emulsions or colloid dispersions containing
49.6 Compounds of other than C, H, O, N and Hals containing
49.7 Metal containing
49.8 Phosphorus containing
49.9 Nitrogen, halogen or other than C, H, O and P containing
50 Nitrogen containing
51 Oxygen, halogen or other than C, H and N containing
51.5 Oxygen containing
52 Oxygen containing
54 Halogen or other than C, H, and O containing
54.6 Carboxyl containing
55 Artificially-oxidized hydrocarbons containing
56 Carboxylic acids or esters containing
57 Carbocyclic or non-aliphatic compounds containing
58 Halogen containing
59 Hydrocarbon containing
60 **Physical separation agents**
61 Froth-flotation or differential adherence
62 **Heat or sound insulating**
63 **Dielectric or electrically insulating**
63.2 Solids

Dielectric or electrically insulating
63.5 Metal compounds or inorganic components containing
63.7 Organic compounds of other than C, H, O and Hal
64 Oxygen organic compound containing
65 Halogen organic compound containing
66 Halogen organic compound containing
67 **Vaporization, or expansion, refrigeration or heat or energy exchange**
68 With lubricants, or warning, stabilizing or anticorrosion agents or persistent gases
69 With low-volatile solvent or absorbent
70 **Frost-preventing, ice-thawing, thermostatic, thermophoric, or cryogenic**
71 **Heat-exchange, low-freezing or pour point, or high boiling compositions**
72 With leak-stopping agents
73 Organic components
74 Metal compound or inorganic components (except water)
75 Organic compounds of non-metals other than C, H, and O
76 Carboxylic organic compounds containing
77 Organic compounds of non-metals other than C, H, and O
78 Organic compounds of non-metals other than C, H, O, and N
79 Carboxylic organic compounds containing
80 **Descaling agent containing**
81 Deoxidant or free-metal containing
82 Plant or organic material containing
83 Tannin, bark, or bark extract containing
84 With inorganic compound or element (except water)
85 Inorganic matter other than alkali metal hydroxides and carbonates and water
86 With inorganic compound or element (except water)
87 Inorganic matter other than alkali metal hydroxides and carbonates and water

88 **Sweeping or dust- or particle-adherent**
89 **Detergents (for use on solid materials)**
90 Packages or heterogeneous arrangements
91 Impregnated or coated with detergents
92 Separate soap containing and non-soap zones
93 Wrapped or encased soaps
94 With chemical bleachant, oxidant, or reductant
95 Oxidant containing
96 Soap (water-soluble fatty acid or rosin) containing
97 Water-soluble inorganic B, Si or P compound containing
98 NH_3, amine, or nitrogen base compound containing (except proteins)
99 Water-soluble inorganic B, Si or P compound containing
100 Acidic
101 HNO_3 or aqua regia containing
102 NH_3, amine, or nitrogen base compound containing (except proteins)
103 Alkaline
104 Solvent (physical or chemical) containing
105 Reductant containing
106 Antiseptic, insecticide, or biocide containing
107 Soap (water-soluble fatty acid or rosin) containing
108 Soap (water-soluble fatty acid or rosin) containing
109 Water-soluble inorganic B, Si or P compound containing
110 NH_3, amine, or nitrogen base compound containing (except proteins)
111 Physical non-water solvent containing
112 Water-insoluble abradant, wax or filler containing
113 Water-insoluble abradant, wax or filler containing
114 Physical non-water solvent containing
115 Water-insoluble abradant, wax or filler containing
116 Water-insoluble abradant, wax or filler containing

Detergents (for use on solid materials)
Soap (water-soluble fatty acid or rosin) containing
117 NH_3, amine, or nitrogen base compound containing (except proteins)
118 Physical non-water solvent containing
119 Water-insoluble abradant, wax or filler containing
120 Water-insoluble abradant, wax or filler containing
121 Organic sulpho-compound containing
122 Physical non-water solvent containing
123 Water-insoluble abradant, wax or filler containing
124 Organic and inorganic type
125 Organic type
126 Hydrocarbon or halohydrocarbon containing
127 Non-hydrocarbon-non-soap organic compound containing
128 Water-insoluble abradant, wax or filler containing
129 Organic and inorganic type
130 Organic type
131 Inorganic type
132 With other organic, plant, or animal matter or compound
133 With inorganic compound or element (except alkali metal hydroxides and carbonates and water)
134 Shapes or structures
135 Water-soluble inorganic B, Si or P compound containing
136 Acidic
137 NH_3, amine, or nitrogen base compound containing (except proteins)
138 Organic sulpho-compound containing
139 Physical non-water solvent containing
140 Water-insoluble abradant, wax or filler containing
141 Water-soluble cyanides or cyanates containing
142 Acidic
143 Physical non-water solvent containing
144 Water-insoluble abradant, wax or filler containing

Detergents (for use on solid materials)
Acidic
145 Water-insoluble abradant, wax or filler containing
146 With corrosion inhibitants
147 Compounds of elements other than C, H, O, N, S, Cl, Na, and K containing
148 Organic nitrogen compound containing
149 Thio-organic compound containing
150 Thiazole nucleus containing
151 Organic sulphur compound containing
152 NH_3, amine, or nitrogen base compound containing (except proteins)
153 Physical non-water solvent containing
154 Water-insoluble abradant, wax or filler containing
155 Water-insoluble abradant, wax or filler containing
156 Alkaline
157 Gas-generative
158 Physical non-water solvent containing
159 Water-insoluble abradant, wax or filler containing
160 Water-insoluble abradant, wax or filler containing
161 Organic sulpho-compound containing
162 Physical or chemical non-water solvent containing
163 Abradent, wax, cellulose-ester, inorganic solid or filler containing
164 With oxygen organic compounds
165 With organic compounds of other than C, H, and O
166 With hydrocarbon solvents
167 With hydrocarbon solvents
168 Wax or cellulose-ester and abradant, inorganic solid or other filler containing
169 Wax or cellulose-ester containing
170 Oxygen organic compound containing
171 Organic compounds of other than C, H, and O containing
172 Non-hydrocarbon substances containing
173 Aqueous
174 Shapes or structures

175 **Water-softening or purifying or scale-inhibiting agents**
176 Packages or heterogeneous arrangements
177 Antiseptic, germicide, or biocide containing
178 Deoxidant or free-metal containing
179 Water-insoluble base-exchange agent containing
180 Plant or organic material containing
181 With inorganic matter other than alkali metal hydroxides and carbonates and water
181.1 **Getters or gas or vapor generating materials for electric lamps, electric space discharge devices and similar devices**
181.2 Plural getters and/or gas or vapor generating materials
181.3 Reactive compositions
181.4 Containing magnesium, alkali metal or alkaline earth metal or compound thereof
181.5 Gaseous getters
181.6 Metal or metal compound containing
181.7 Magnesium, alkali metal or alkaline earth metal
182 **Chemical agents or materials (except mere water bindive or emissive)**
183 Cellulose-liberation agents
184 Absorptive, or bindive, and chemically yieldive
185 Plumbiferous sulphur bindant or modifiant containing
186 Oxidative bleachant or oxidant containing or generative
187 Free halogen or oxy-halogen-acid type
188 Reductive bleachant, deoxidant, or reductant containing or generative
188.3 Chemically interreactive components
189 CO, S, negative element, or acid, bindant containing
190 With adsorbents
191 Basic-iron containing
192 Alkali-metal or alkali-metal compound containing
193 NH_3, alkali or base, bindant containing
194 **Humidostatic, water removive, bindive, or emissive**
195 **Catalysts**
196 Products, catalytic
197 Dissolved, dispersed or enveloped, in liquids or low fusing solids

Catalysts
Products, catalytic
Dissolved, dispersed or enveloped, in liquids or low fusing solids
198 With high-fusing solid carriers or non-catalytic matters
199 Metal-compound-catalysts-containing other than oxides or hydroxides and metal metallates
200 Combined metal-groups catalysts
201 Nickel group catalyst containing
202 Carriers or solid non-catalytic matters containing
203 Siliceous or silicate carriers or non-catalytic matters
204 Metal or metal compound catalysts containing
205 Metal compound catalysts other than oxides, hydroxides and metal metallates
206 Combined metal-groups catalysts
207 Group 8 metal catalysts containing
208 Platinum group metal catalysts containing
209 Group 5 metal catalysts containing
210 Metal compound carriers or non-catalytic matters
211 Metal compound catalysts other than oxides, hydroxides and metal metallates
211.5 Combined metal-groups catalysts
212 Group 8 metal catalysts containing
213 Metal carriers or non-catalytic matters
214 Combined metal-groups catalysts
215 Group 8 metal catalysts containing
216 Non-metal elements or compounds, carriers or non-catalytic matters
217 Metal or metal compounds catalysts containing
217.3 Metal compound catalysts other than oxides, hydroxides and metal metallates
217.6 Combined metal-groups catalysts
218 Group 8 metal catalysts containing
219 Metal or metal compounds catalysts containing
220 Metal compounds catalysts other than oxides, hydroxides and metallates

Catalysts
Products, catalytic
Carriers or solid non-catalytic matters containing
Metal or metal compounds catalysts containing
221 Combined metal-groups catalysts
222 Group 8 metal catalysts containing
223 Organic compounds containing
223.3 Metal or metal compound containing
224 Metal or metal compounds containing
225 With metal-free compounds or elements
226 Metal compounds other than oxides, hydroxides and metal metallates
227 Group 4 non-metal type containing
227.5 Carbon containing (including cyanides)
228 Group 5 non-metal type containing
228.2 Phosphorus containing
228.4 S, Se, or Te compound containing
228.7 Halogen compound containing
229 Combined metal groups containing
230 Group 8 metal containing
230.3 Manganese containing
230.6 Group 6 metal containing
231 Group 3 metal containing
231.5 Group 1 metal containing
231.7 Manganese containing
232 Group 6 metal containing
232.2 Group 4 metal containing
232.3 Group 2 metal containing
232.4 Group 5 metal containing
232.8 Group 1 metal containing
233 Group 8 metal containing
234 Structure or physical form
234.1 Manganese containing
234.3 Group 2 metal containing
234.4 Group 1 metal containing
235 Structure or physical form
236 Processes, making catalytic products
237 Regeneration, reactivation, or spent catalyst treatment

Catalysts
Processes, making catalytic products
Regeneration, reactivation, or spent catalyst treatment
238 Including elimination and reassociation with non-gaseous carriers or non-catalytic matter
239 Including halogen or acid treatment
240 Including reduction or element-liberation
241 Including halogen treatment, oxidation or element-fixation (other than heat-decomposition)
242 Including oxidation or element-fixation (other than heat-decomposition)
243 Including reduction or element-liberation
244 Including reduction or element-liberation
245 Including incorporation in or under final liquid or low-fusing solid
246 Including association with high-fusing carrier or non-catalytic matter
247 Including reduction or element-liberation
248 Including association with non-gaseous final carrier or non-catalytic matter
249 Including making final carrier or non-catalytic matter
250 Including deposition on carrier from fluid suspension or state (except from melted or liquid alloy)
251 Including deposition on carrier from fluid suspension or state (except from melted or liquid alloy)
252 Including reduction or element-liberation
253 Including deposition on carrier from liquid suspension or solution
254 Including chemical modification of catalystogen
255 Including halogen treatment, oxidation or element-fixation (other than heat-decomposition)
256 Including reduction or element-liberation
257 Including reduction or element-liberation
258 Including precipitation from fluid suspension or state (except from melted or liquid alloy)

Catalysts
Processes, making catalytic products
259 Including shaping, sizing, agglomerating, hardening or surface-extending
259.2 Including pelleting, molding or shaping
259.3 Including coating, comminuting, surface extending or physically activating shaped bodies
259.5 **Combined liquids and solid absorbents or fillers**
260 **Adsorbents or solid absorbents**
261 Products, solid absorbent
262 Free carbon containing
263 Non-char type additant containing
264 Inorganic additant containing
265 Silica or silicate additant containing
266 Charred animal matter containing
267 Charred coal or vegetable matter containing
268 Structure or physical form
268.3 Solid organic compound containing
268.5 Inorganic additant containing
268.6 Silica or silicate additant containing
269 Silica or silicates containing
270 With non-siliceous matter
271 Diatomaceous
272 Structure or physical form
273 Processes, making solid absorbents
274 Regeneration, reactivation or spent-absorbent treatment
275 Including halogen treatment
276 Including lixiviation or liquid treatment
277 Including oxidation or extraneous gas treatment
278 Including acid, alkali, or non-oxidation chemical treatment
279 Including acid, alkali, or chemical treatment
280 Including oxidation or extraneous gas treatment
281 Including free-oxygen containing gaseous agent
282 Free-carbon containing, making
283 Including charring

Adsorbents or solid absorbents
Processes, making solid absorbents
Free-carbon containing, making
Including charring
284 In presence of non-gaseous-non-C-non-charrable additant (except water)
285 In presence of non-charrable silica or silicate additant
286 Including post-charring lixiviation or liquid treatment
287 Including post-charring oxidation or extraneous gas treatment
288 Including charring animal matter
289 Including charring coal or vegetable matter
290 Including post-charring lixiviation or liquid treatment
291 Including post-charring oxidation or extraneous gas treatment
292 Including post-charring lixiviation or liquid treatment
293 Including post-charring oxidation or extraneous gas treatment
294 Including adding retained non-free-carbon
295 Including halogen treatment
296 Including lixiviation or liquid treatment
297 Including oxidation or extraneous gas treatment
298 Including oxidation or extraneous gas treatment
298.5 Solid organic compound containing, making
299 Silica or silicates containing, making
300 Including water soluble silicates, forming or using
301 Including strong acid treatment
301.1 **Radio-active**
301.2 **Fluorescent or phosphorescent**
301.3 Organic and inorganic materials (except water)
301.4 Inorganic materials only
301.5 Tungsten containing
301.6 Zinc or cadmium containing

302 **Colloids**
303 Including separations or comminutions by colloid functions
304 Colloid (polyphase discontinuous-dispersion) systems
305 Smokes, fogs, or gaseous primary dispersants
306 Liquid primary dispersants
307 Foams or gaseous primary dispersands
308 Organic major dispersants only
309 Inorganic major dispersands only
310 Water as major dispersant only
311 Organic major dispersands only
311.5 Bituminous dispersands
312 Oil or liquid dispersands
313 Inorganic major dispersands only
314 Dispersive or manipulative operations
315 Gels, coagulates or dispersands
316 Organic
317 Inorganic or elements
318 Potential dispersands, or dispersants, with colloidization inhibitants
319 Resolving colloids or inhibiting colloidization
320 Liquid primary dispersants
321 Foams or gaseous primary dispersands
322 Adsorbent or solid surface functioning treating substances
323 Organic and inorganic agents (except water)
324 Inorganic agents (except water)
325 Organic agents
326 Added non-gaseous dissimilar treating substances
327 Added dissimilar solvents, bindants or liquid baths
328 Resolving aqueous-petroleum or aqueous-hydrocarbon systems
329 Organic and inorganic agents (except water)
330 Inorganic agents (except water)
331 Organic agents
332 Organic sulphoxy compound containing

Colloids
Resolving colloids or inhibiting colloidization
Liquid primary dispersants
Added non-gaseous dissimilar treating substances
Resolving aqueous-petroleum or aqueous-hydrocarbon systems
Organic agents
Organic sulphoxy compound containing
333 Petroleum-sulphoxy compound containing
334 Organic amine, amide, or N-base containing
335 Protein or carboxylic compound containing
336 Organic amine, amide, or N-base containing
337 Carbocyclic or non-aliphatic sulphoxy or carboxylic compound containing
338 Organic amine, amide, or N-base containing
339 With non-sulphoxy, non-carboxylic non-amine compounds
340 Protein or carboxylic compound containing
341 Organic amine, amide, or N-base containing
342 Carbocyclic or non-aliphatic carboxylic compound containing
343 With non-carboxylic non-amine compounds
344 Organic amine, amide, or N-base containing
345 With elements other than C, H, and O
346 Vaporizing, heating or cooling
347 With mechanical treatment
348 With added component
349 Mechanically
350 Gas-generating agent containing
351 Wetting, emulsifying, dispersing, or stabilizing agents

Colloids
Wetting, emulsifying, dispersing, or stabilizing agents
352 Organic and inorganic agents containing (except water)
353 Organic sulphoxy compound containing
354 Protein or carboxylic compound containing
355 Organic amine, amide, or N-base containing
356 Protein or carboxylic compound containing
357 Organic amine, amide, or N-base containing
358 Emulsification or liquid dispersant colloidization-inhibiting emulsion-breaking or liquid dispersant colloids resolving agents
359 Apparatus
360 Resolving or inhibiting
361 Foam breaking or inhibiting
362 Including heating means
363 With mechanical treatment means
363.5 **Solids with solution or dispersion aids**
364 **Solvents**
365 **Anti-ingestible or denatured**
366 Alcohol type
367 **Soaps (alkali-metal salts of water-insoluble fatty or rosin acids)**
368 Products
369 Including saponification
370 With subsequent operations
371 Apparatus only
372 **Gaseous compositions**
373 Carbon-oxide and H_2 containing
374 N_2 and H_2 containing
375 N_2 from elementary N_2 only and H_2 from compounds
376 H_2 from hydrocarbons
377 From elementary N_2 and H_2 only or purification
378 **Exfoliated or intumesced**
380 **Preservative agents**
381 Anti-caking, separative or protective coatings or zones
382 Foams, liquids or fluids

Preservative agents
Anti-caking, separative or protective coatings or zones
383 Organic and inorganic matter containing
384 Organic compound containing
385 Inorganic compound or element containing
386 Anti-knock or anti-explosion
387 Anti-corrosion
388 Organic compound containing
389 Components inorganic or other than C, H, O, N, S, and Hal
390 Amine, amide, azo, or nitrogen-base radical containing
391 Sulphur organic compound containing
392 Oxygen organic compound containing
393 Phenol or quinone radical containing
394 Nitrogen organic compound containing
395 Sulphur organic compound containing
396 Oxygen organic compound containing
397 Anti-oxidants or chemical change inhibitants
398 Plant or animal matters of unknown compositions
399 Organic compound containing
400 Components inorganic or other than C, H, O, N, S, and Hal
401 Amine, amide, azo, or Nitrogen-base radical containing
402 Sulphur organic compound containing
403 Oxygen organic compound containing
404 Phenol or quinone radical containing
405 Nitrogen organic compound containing
406 Sulphur organic compound containing
407 Oxygen organic compound containing
408 **Analytical, testing, or indicating compositions**

1 **Miscellaneous**
Rotary-tool driving
2 Peripheral supply
3 End supply
4 **Tide or wave**
5 Floating
6 Pendulum
7 Float
8 Float
9 Tank contained
10 Vertically guided
11 Pivoted
12 Reciprocating carriage
13 Endless chain
14 Rotary
16.5 **Reversely rotating**
17 **Water operated**
18 Float
19 Oscillating bucket
20 Endless chain
21 Gravity bucket
22 Rotary
Peripheral supply
23 Reversing
Jet
24 Automatic control
25 Plural shafts
26 Single shaft
27 Gravity bucket
28 Horizontal axis
29 Intermittent
30 Pivoted bucket
31 End supply
32 Series
33 Center supply
Gravity bucket
34 Horizontal axis
35 Intermittent
36 **Gas operated**
37 Atmospheric
Gas operated
Atmospheric
38 Rotary end supply
39 Rotary
40 Peripheral supply
Single shaft
Opposed delivery
44 End supply
45 Endwise flow
46 Series
Jet
47 Reversing
48 Peripheral supply
49 Endwise flow
50 Jet
51 Reversing
52 Automatic control
53 Serial flow
54 Reactive delivery
55 Center delivery
56 Plural
57 End supply
59 Automatic control
65 Single shaft
66 Serial flow
67 Opposed delivery
68 United delivery
69 Series
70 Reversing
71 Reentrant radial flow
72 Reversing
73 Reversing
74 Opposed supply
Double bucket
75 Intermediate supply
76 With condensate separator
77 Buckets or baffles
78 Nozzles or valves

253. MOTORS—FLUID—Continued.

Gas operated
Rotary
79 Center supply
81 Reversing,
82 Automatic control,
Single shaft
85 Opposed delivery,
86 Opposed supply,
87 Series
88 Endwise flow,
89 Reaction wheel,
90 Jet,
91 Reaction
92 Serial bucket
93 Serial flow,
94 Serial bucket
95 Single bucket,
96 **Rotary**
Peripheral supply
97 Automatic control,
101 Single shaft
Angular vane
102 Opposed delivery
103 Scroll,
104 United delivery,
Jet,
105 Reversing,
106 Series
107 End delivery
108 Scroll,
109 Angular vane,
110 Jet,
111 Opposed delivery
112 Scroll,
113 Jet
114 Divided bucket,
115 Double bucket,
116 Staggered bucket,

253. MOTORS—FLUID—Continued.

Rotary
Peripheral supply
117 End delivery
118 Angular vane
119 Parallel supply,
120 Scroll,
121 Axially movable gate,
122 Pivoted gate,
123 Rotary annular gate.
124 Scroll
125 Plural
126 Parallel supply,
127 Axially movable gate,
128 Pivoted gate,
129 Jet
130 Plural
131 Pivoted gate,
132 Parallel supply,
Center delivery
133 Jet
134 Peripheral delivery,
135 Scroll,
136 Jet
137 Reversing,
138 Automatic control
139 Flow operated,
140 Plural,
141 End supply
142 Reversing,
143 Automatic control
144 Flow operated,
148 Single shaft
149 Opposed delivery,
150 United delivery,
151 Parallel supply,
152 Series,
153 Angular vane
154 Axially movable gate,
155 Pivoted gate,

253. MOTORS—FLUID—Continued.

Rotary
End supply
Single shaft
Angular vane
156 Rotary annular gate,
157 Scroll,
158 Jet
159 Plural
160 Rotary annular gate,
Center supply
163 Single shaft
164 Series,
165 Reversing,
166 Automatic control,
167 Angular vane
168 Axially movable gate,
169 Pivoted gate,
170 Rotary annular gate,
171 Scroll,
172 Jet,
173 Reaction
174 Axially movable gate,
175 Tube wheel.

254 PUSHING AND PULLING IMPLEMENTS.

1 **Miscellaneous.**
2 **Hoisting trucks**
3 Tilting load support,
4 Cable hoist,
5 Inclined plane or wedge,
6 Rack and pinion or segment,
7 Screw,
8 Single-throw lever
9 Toggle,
10 Parallelogram bars.
11 **Floor-jack type**
12 Rack and pinion or segment,
13 Screw,
14 Step-by-step traveling member,
15 Single-throw lever and bar
16 Sliding bar,
17 Single-throw lever.
18 **Nail-extractor type**
19 Hammer and anvil,
20 Screw,
21 Single-throw lever
22 Lever and pivoted-jaw grip,
23 Multiple-jaw grip
24 Cam or wedge actuated,
25 Claw bar
26 Hammers,
27 Pivoted fulcrum member.
28 **Staple pullers.**
28.5 **Thill-coupling jacks.**
29 **Pipe or rod jacks**
30 Lifters
31 Reciprocating clutch.
32 **Axle-lubricating jacks.**
33 **Car-journal-box lifting**
34 Suspended lifter.

254. PUSHING AND PULLING IMPLEMENTS—Continued.

35 **Car-pusher type**
36 Pinch bar
37 Rail clamping,
38 Pivoted wheel engaging member.
39 **Door braces.**
40 **Printers' quoins**
41 Screw,
42 Wedge.
43 **Rail or tie shifters**
44 Single-throw lever.
45 **Vehicle-body lifters**
46 Lever and drum,
47 Cable hoist
48 Vehicle-attached drum,
49 Swinging side bars
50 Single fixed pivot.
51 **Stretcher type**
52 Belt
53 Cable actuated,
54 Screw,
55 Step-by-step traveling member
56 Multiple driving pawls,
57 Carpet
58 Cable actuated,
59 Rack and pinion or segment,
60 Step-by-step traveling member
61 Pawl actuated,
62 Single-throw lever
63 Pivoted thrust bars,
64 Reel carriers and stretchers,
65 Block and tackle,
66 Rack and pinion or segment,
67 Screw,
68 Step-by-step traveling bar
69 Clutch actuated
70 Multiple driving clutches,

254. PUSHING AND PULLING IMPLEMENTS—Continued.

Stretcher type
Step-by-step traveling bar
71 Pawl actuated
72 Multiple driving-pawls,
73 Reciprocating lever-actuated grip
74 Chain
75 Multiple pulling grips,
76 Multiple pulling grips,
77 Single-throw lever
78 Chain tighteners,
79 Strap or band tighteners,
80 Jointed-lever grip,
81 Multiple grips
82 Post straddling,
83 Fence-engaging devices.
84 **Traversing jacks**
85 Screw.
86 **Attached vehicle jacks**
87 Turntable.
88 **Inclined-plane lifters.**
89 **Multiple lifters**
90 Track-straddling platform,
91 Swinging platform,
92 Screw.
93 **Fluid pressure.**
94 **Rocking supports.**
95 **Rack and pinion**
96 Screw pinion,
97 Geared.
98 **Screw**
99 Derrick type,
100 Special engaging feature
101 Rocking head or base,
102 Telescoping screws,
103 Geared.
104 **Wedge.**

254. PUSHING AND PULLING IMPLEMENTS—Continued.

105 **Step-by-step traveling bar**
106 Clutch actuated
107 Multiple driving clutches,
108 Pawl actuated
109 Multiple driving-pawls
110 Reversing,
111 Reversing,
112 Rack and lever.
113 **Single-throw lever and bar**
114 Sliding bar
115 Rack bar and segment,
116 Adjustable
117 Lateral shoe,
118 Rack bar,
119 Adjustable.
120 **Single-throw lever**
121 Rail or tie lifters,
122 Lazy tongs,
123 Lever-supported thrust bar,
124 Mechanically actuated
125 Vehicle-tongue connection,
126 Screw,
127 Cable
128 Block and tackle,
129 Adjustable
130 Multiple fulcrums,
131 Special engaging feature
131.5 Fulcrumed fork or shovel,
132 Root-puller type.
133 **Special engaging elements**
134 Adjustable.
135 **Cable**
136 Coffin lowering,
137 Fish-net hauling
138 Grip feature,
139 Derrick hoists
139.1 Portable.

254. PUSHING AND PULLING IMPLEMENTS—Continued.

Cable
Derrick hoists
140 Tobacco hanger,
141 Theater-curtain type,
142 Building supported,
143 Extensible load support,
144 Multiple cable,
145 Drum
146 Lever actuated,
147 Reciprocating surface cable,
148 Cable-actuated sliding members,
149 Quick-take-up devices,
150 Drum
151 Fire-escape type
152 Spring actuated
153 Suspended,
154 Suspended
155 Pulley block,
156 Cable brake,
157 Centrifugal brake,
158 Fluid brake,
159 Centrifugal brake
160 Fluid brake,
161 Stretcher type
162 Post engaging
163 Lever actuated,
164 Lever actuated,
165 Spring compensator,
166 Wheeled carrier,
167 Suspended
168 Motor actuated,
169 Hand-cable actuated
170 Screw gearing,
171 Spur gearing,
172 Variable-tension compensating,
173 Automatic control
174 Combined stops,
175 Slack-cable stops,

254. PUSHING AND PULLING IMPLEMENTS—Continued.

Cable
Drum
176 Cable driving
177 Multiple
178 Counterbalance feature
179 Sweep actuated
180 Horizontal axis
181 Clutch controlled
182 Clutch controlled
183 Multiple drums
184 Horizontal axis
185 Clutch controlled
186 Horizontal axis
187 Clutch controlled
188 Block and tackle
189 Multiplying sheaves
190 Guides
191 Grip pulley
192 Blocks
193 Opening
194 Attachment feature
195 Attachment feature
196 Detaching devices
197 Guide or guard feature
198 Sag preventers

255. EARTH BORING

1 **Miscellaneous**
1.4 **Sampling**
1.6 **Bore deflecting**
1.8 **Methods**
2 **Rigs**
3 Combination
4 Advancing motor
4.4 Reciprocating tool
4.6 Electric motor
4.8 Electric motor
5 Impact tool
6 Automatic grip and release
7 Crank actuator
8 Loose arm or pin
9 Drum or reel actuator
10 Reciprocating actuator
11 Rocking arm
12 Cam or tappet actuated
13 Quick drop
14 Turning devices
15 Feeding devices
16 Cushioning devices
17 Shifting devices
19 Rotary tool
20 Horizontal type
21 With carrier
22 Feed
23 Rotaries
24 Washers
25 Fluid-circulating heads
26 Drill swivels and sockets
27 Jars
28 Rods
33 Rope guards
34 Rope knives
35 Wrenches
36 **Rock-drilling machines**
37 Impact
38 Piston driven
39 Spring driven
40 Free impact
41 Hammer
42 Reciprocating
43 Rotating mechanism
44 Hand hammer
45 Feeding devices
46 Rotary
47 Motor operated
48 Ratchet operated
49 Washers
50 Dust and sludge collectors
51 Supports
52 Single end engagement
53 Column
54 Legged
60 **Hole clearers**
61 **Drills, bits, and augers**
62 Noncircular hole
63 Impact
64 Fluid passage
65 Dirt releasing
66 Blade type
67 Pod or shell
68 Bottom valve
69 Screw
70 Plate
71 Roller
72 Core
73 **Reamers**
74 Expansible
75 Longitudinally movable bit
76 Pivoted bit
77 Resilient bit
78 Rocking bit

256. FENCES

1 **Miscellaneous**
2 **Barbed**
3 Guarded
4 Visible
5 Fabrics
6 Strands
7 Single
8 Integral barb
9 Sectional
10 **Electric**
11 **Top guarded**
12 Unstable
12.5 **Driftage control**
13 **Flood**
13.1 **Highway guard**
14 **Track guard**
15 Rocking
16 Rotary
17 Bar
18 Pronged
19 **Earth, stone, plastic, and wooden**
20 **Hedge**
21 **Metallic**
22 Picket
23 **Suspended**
24 **Panel**
25 Inclosure
26 Hinged
27 Angle
28 Tied
29 Tied
30 Braced
31 Braced
32 **Wire**
33 All wire
34 Picket
35 Braced
36 Trussed

Wire
37 Stretcher
38 Gravity
39 Spring
40 Winder
41 Multiple
42 Bracket
43 Internal
44 Lateral
45 Fabrics
46 Strands
47 Connections
48 Cross
49 Facing strip
50 Plastic
51 Reenforced
52 Multiple
53 Nonalined slots
54 Clamp
55 Screw
56 Wedge
57 Tie
58 No clip
59 **Rail**
60 Angle
61 Tied
62 Tied
63 Braced
64 Braced
65 Connections
66 Plastic
67 Adjustable
68 Clamp
69 Screw
70 Wedge
71 Tie
72 No clip
73 **Panels**

257. HEAT EXCHANGE

1 **Miscellaneous**
2 **Automatic control**
3 Combined heating and cooling
4 Liquid
5 Regenerative
6 **Heating and cooling**
7 Car
8 Building
9 Air
10 Liquid
11 Regenerative
12 **Body**
13 Coffin type
14 **Barrel**
15 Internal tube
16 **Muffler type**
17 **Chamber**
17.5 Subterranean type with elevator
18 Air-pump circuit
19 Liquid-pump circuit
20 Radiator type
21 Casing
22 Internal tube
23 Conveyer
24 **Condensers**
25 Motor vehicle
26 Ship
27 Convertible jet or surface
28 Surface
29 Separator
30 Still
31 Feed-heater type
32 Condensate cooler
33 Varied surface
34 Receptacle closure
35 Liquid trickler

Condensers
Surface
36 Air
37 Water injected to air
38 Water injected to steam
39 Air pump
40 Water injected to steam
41 Air injected to steam
42 Plural outlet
43 Horizontal water tube
44 Pump system
45 Spur tube
46 Radiator type
47 Varied surface
48 Condensate varied
49 Loop tube
50 Spur tube
51 Processes
52 **Gas and liquid contact**
53 Trickler
54 Exchange tube
55 Liquid circuit
56 Vertical air tube
57 Air pump
58 Closed chamber
59 Agitator
60 Agitator, evaporative
61 Closed chamber
62 Gas injected
63 Agitator
64 Closed chamber
65 Liquid injected
66 Preliminary exchanger
67 Horizontal exchange tube
68 Horizontal air tube
69 Vertical air tube
70 Gas pump
71 Liquid circuit
72 Liquid circuit

73 **Agitators and conveyers**
74 Operated by exchange fluid
75 Shakers
76 Tank
77 Liquid circuit
78 Tube agitator
79 Horizontal rotary
80 Exposed to atmosphere
81 Horizontal rotary internal tank
82 Horizontal rotary agitator
Jacketed
83 Horizontal rotary tube agitator
84 Horizontal rotary agitator
Internal tube
85 Horizontal rotary agitator
Horizontal jacketed cylinder
86 Rotary conveyor
87 Horizontal rotary cylinder
88 Jacketed
89 Closed cylinder
90 Internal tube
91 Internal tube
92 Internal tube
93 Closed cylinder
94 External trickler
95 External exchange
96 Scraper
97 Plural liquid
98 Bottom feed
99 Floated product
Internal exchange
100 Scraper
101 Horizontal rotary conveyer
102 Horizontal rotary
103 Vertical tank
104 Vertical rotary-tube agitator
105 Internal annular tank
Internal tube
106 Vertical rotary agitator
Jacketed
107 Vertical rotary-tube agitator
108 Vertical rotary agitator

Agitators and conveyers
Vertical tank
Jacketed
Internal tube
109 Vertical rotary agitator
Vertical rotary drum
110 Conveying scraper
111 Annular liquid film
112 Vertical rotary conveying agitator
Vertical rotary scraper
113 Floated product
114 Trickler
Vertical rotary plate
115 Liquid film
116 Plate
117 Vertical rotary agitator
Superposed
118 Vertical rotary agitator
119 Vertical rotary-tube agitator
120 Vertical rotary
121 **Subterranean**
122 Liquid
123 Filter
124 **Radiator type**
125 Motor vehicle
126 Air pump
127 Water pump
128 Horizontal air tube
129 Vertical water tube
130 Flat
131 Zigzag water tube
132 Casings and shields
133 Base board
134 Varied surface
135 Bottom air box
136 Incased
137 Air pump
138 Air moistener
139 Sheet metal
140 Vertical sectional

Radiator type
141 Vertical air tube
142 Annular
143 Sheet metal
144 Loop tube
145 Vertical
146 Spur tube
147 Vertical
148 Zigzag
149 Vertical plane
150 Integral fin
151 Vertical sectional
152 Horizontal sectional
153 Single plane sectional
154 Top and bottom header
155 Grid
156 Rack
157 Shelf
158 Horizontal plate
159 Flow control
160 Joints and ties
161 Sectional type
162 Flexible connection
163 Supports
164 **Heating-drum type**
165 Chimney by-pass
166 Air conduit
167 Vertical drum
168 Down and up gas flow
169 Symmetrical
170 Annular tube
171 Transverse air tube
172 Vertical drum
173 Symmetrical
174 Tube type
175 Top and bottom header
176 Zigzag
177 Tube type
178 **Trickler**
179 Two-fluid flow

Trickler
Two-fluid flow
180 Casing
181 Pressure
182 Horizontal plate
183 Zigzag tube
184 Casing
185 Plural tube
186 Casing
187 Vertical plate
188 Horizontal plate
189 Tank
190 Interior
191 **Tank**
192 Indirect exchange
193 Inverted-bottle type
194 Annular
195 Annular internal tank
196 Internal-pressure chamber
197 Annular shell
198 Internal tube
199 Removable
200 Movably attached
201 Annular
202 Air pump
203 Vertical liquid tube
204 Liquid-pump circuit
205 Vertical coil
206 Vertical zigzag
207 Bottom connection
208 Jacketed
209 Internal annular shell
210 Internal tube
211 Circular section
212 Cylindrical
213 Float
214 **Air pump**
215 **Liquid circuit**
216 **Vertical casing**
217 Filter

257. HEAT EXCHANGE—Continued.
Vertical casing
218 Internal flat plate
219 Internal vertical-tube drum
220 Internal tube
221 Vertical loop
222 Vertical return
223 Vertical zigzag
224 Vertical
225 One internal header
226 Return tube
227 Two internal headers
228 Annular
229 Vertical coil
230 Horizontal zigzag
231 Vertical spur
232 Annular film
233 Horizontal casing
235 Internal tube
236 Horizontal
237 Annular
238 Spur
239 Loop
240 Zigzag
234 Zigzag
241 Plural confined fluids
242 Liquid
243 Annular film
244 Air pump
245 Plate conduit
246 Annular tube
247 Zigzag
248 One confined fluid
249 Annular tube
250 Annular shell
251 Vertical tube
252 Zigzag
254 Spur tube
255 Zigzag
256 Plate
257 Table
258 Disk

257. HEAT EXCHANGE—Continued.
One confined fluid
259 Fan
260 Hollow fan
261 Cylinders
262 Conduits
263 Heat transmitters

258. RAILWAY MAIL DELIVERY.

1 Miscellaneous
1.2 Aircraft in flight
1.4 To or from another moving vehicle and/or requiring circular aircraft flight
1.6 With projector
1.8 Load exchange
2 Signaling feature
3 Hand tools
4 Magnetic
5 Projectors
6 Automatically actuated
7 Spring
8 Car-positioned receiver or support
9 Laterally sliding receiver or support
10 Longitudinally extending auxiliary track
11 Combined receiver and support
12 Fork and other receiver
13 Retaining feature
14 Fork receiver only
15 Retaining feature
16 Impact-operated load release
17 Receiver-engaging feature
18 Receiver-engaging feature
19 Impact-operated load release
20 Receivers
21 Fork
22 Retaining feature
23 Supports
24 Interconnected arms

258. RAILWAY MAIL DELIVERY—Con.
Supports
25 Impact-operated load release
26 Receiver-engaging feature

259. AGITATING

1 Miscellaneous
145 Mortar mixers
146 Processes
147 Gas incorporating, fluid mixing, discharging, and/or conveying
148 Combined
149 With ingredient proportioning
150 Gravity type
151 Gas incorporating, fluid mixing, discharging, and/or conveying
152 Plural
153 Combined
154 With ingredient proportioning
155 With heat exchange or drier
156 Combined heated mixer and ingredient preheater
157 Heated mixer
158 Hot gases to interior
159 Ingredient preheater
160 With elevating means
161 With feeding and discharging
162 Interrelated
163 With automatic control means
164 With feeding
165 Plural feed
166 Skip and liquid
167 Skip
168 Liquid
169 With discharging
170 With control means
171 Movably mounted dumping receptacle
172 Movable chute
173 Movable receptacle
174 With stirrer

259. AGITATING—Continued.
Mortar mixers
Movable receptacle
175 Rotatable
176 With supporting structure
177 With actuating means
178 Movable stirrer
179 Plural stirrer shafts
180 Gravity type
2 Feeding and discharging
3 Receptacle rotating
4 Receptacle fixed
5 Stirrer rotating
6 Axis fixed
7 Single stirrer
8 Vertical, with actuating means
9 Horizontal
10 With actuating means
11 Feeding
12 Receptacle moving
13 Oscillating
14 Rotating
15 Stirrer
16 Single, rotating
17 Translating
18 Receptacle fixed
19 Stirrer
20 Oscillating
21 Rotating
22 Single stirrer, axis fixed
23 Vertical
24 With actuating means
25 Horizontal
26 With actuating means
27 Translating
28 Discharging
29 Receptacle moving
30 Rotating
31 Stirrer
32 Rotating
33 Single stirrer
34 Fixed
35 Translating

259. AGITATING—Continued.

Discharging

36 Receptacle fixed
37 Stirrer
38 Oscillating
39 Single stirrer
40 Rotating
41 Axis fixed
42 Single stirrer
43 Vertical
44 With actuating means
45 Horizontal
46 With actuating means
47 Translating
48 **Receptacle plural**
49 Fixed rotating
50 Single rotating receptacle
51 Stirrer
52 Translating
53 Fixed
54 Moving
55 Rocking
56 Oscillating
57 Rotating
58 Stirrer
59 Translating
60 Fixed
61 Stirrer
62 Oscillating
63 Single stirrer
64 Rotating
65 Single stirrer, axis fixed
66 Vertical
67 With actuating means
68 Horizontal
69 With actuating means
70 Translating
71 Single stirrer

259. AGITATING—Continued.

72 **Receptacle moving**
73 Rocking
74 Stirrer
75 Oscillating
76 Stirrer
77 Oscillating
78 Rotating
79 Translating
80 Fixed
81 Rotating
82 Stirrer
83 Oscillating
84 Rotating
85 Single stirrer
86 Translating
87 Single stirrer
88 Fixed
89 Receptacles
90 Vented
91 Translating
92 Stirrer
93 Rotating
94 Fixed

Receptacle fixed

95 Pump type
96 Centrifugal
97 Screw
98 Piston
99 Stirrer
100 Oscillating
101 Single stirrer
102 Rotating
103 Axis fixed
104 Parallel axes
105 Coincident axes
106 Single stirrer
107 Vertical
108 With actuating means
109 Horizontal
110 With actuating means

259. AGITATING—Continued.

Receptacle fixed

Stirrer
Rotating
111 Single stirrer
112 Translating
113 Single stirrer
114 Single stirrer
115 **Covers with pumps**
116 **Covers and stirrers**
117 Oscillating stirrer
118 Rotating stirrer
119 Axis fixed
120 Coincident axes
121 Single stirrer
122 Vertical
123 Translating stirrer
124 Single
125 **Covers**
126 **Stirrers**
127 Oscillating
128 Single stirrer
129 Rotating
130 Axis fixed
131 Parallel axes
132 Coincident axes
133 Single stirrer
134 Vertical
135 With actuating means
136 Horizontal
137 With actuating means
138 Single stirrer
139 Translating
140 Single stirrer
141 With actuating means
142 Screw
143 Valve
144 Single stirrer

260 CHEMISTRY, CARBON COMPOUNDS

1 MISCELLANEOUS
2 SYNTHETIC RESINS
3 **With vulcanizable natural gum or derivative (e. g., rubber)**
4 Polymerized unsaturated compounds
5 Polymerized diolefines or halo-diolefines
6 **With protein or derivative**
7 Phenolic-aldehyde products
8 Polymerized unsaturated compounds
9 **With carbohydrate or derivative**
10 By reaction with phenols or phenoxides
11 By reaction with polycarboxylic acids or anhydrides thereof
12 By sulfurization
13 Cellulose ether or ester (e. g., lacquers)
14 Phenolic-aldehyde products
15 Amine- or amide-aldehyde products
16 Polycarboxylic acid-polyhydric alcohol reaction products
17 Polymerized unsaturated compounds
17.5 **With lignin or derivative**
18 **With fat, fatty oil, fatty oil acid or salt thereof**
19 Phenolic-aldehyde products
20 Polycarboxylic acid-polyhydric alcohol reaction products
21 Amine- or amide-aldehyde products
22 Polycarboxylic acid-polyhydric alcohol reaction products
23 Polymerized unsaturated compounds
24 **With natural resin or modified forms thereof**
25 Phenolic-aldehyde products
26 Polycarboxylic acid-polyhydric alcohol reaction products
27 Polymerized unsaturated compounds
28 **With wax, bituminous material or fatty still residues**
29 **With solvent or dispersing medium**
30 Phenolic-aldehyde products

260. CHEMISTRY, CARBON COMPOUNDS—Con.
SYNTHETIC RESINS
With solvent or dispersing medium
31 Polycarboxylic acid-polyhydric alcohol reaction products
32 Polymerized unsaturated compounds
33 **With flux**
34 Phenolic-aldehyde products
35 Polycarboxylic acid-polyhydric alcohol reaction products
36 Polymerized unsaturated compounds
37 **With filler, dye or pigment**
38 Phenolic-aldehyde products
39 Amine- or amide-aldehyde products
40 Polycarboxylic acid-polyhydric alcohol reaction products
41 Polymerized unsaturated compounds
42 **Mixed synthetic resins**
43 Phenolic-aldehyde products
44 With polycarboxylic acid-polyhydric alcohol reaction products
45 With amine- or amide-aldehyde products
46 **From resin-forming vegetable extracts (e. g., cashew nut shell liquor)**
47 **From phenols or phenoxides**
48 By sulfurization
49 Sulfoxy containing
50 With ketones
51 Aldehydes
52 Phenol ethers
53 Monocyclic phenols or phenates
54 Polyhydric phenols
55 Phenol or C-methyl phenol
56 Furyl compound
57 Formaldehyde
58 With polyhydric alcohols or their ethers
59 With subsequent treatment
60 Neutralization
61 With organic polyhalides
62 With unsaturated hydrocarbons

260. CHEMISTRY, CARBON COMPOUNDS—Con.
SYNTHETIC RESINS
63 **From ketones**
64 With aldehydes
65 With amines or amides
66 With polymerized unsaturated compounds
67 **From aldehydes**
68 With ureas
69 Formaldehyde
70 With additional organic reactant
71 With subsequent treatment
72 With amines or amides
73 With vinyl compounds
74 **Halogenated aromatic compounds**
75 **Polyhydric alcohol-polycarboxylic acid reaction products**
76 With monocarboxylic acid or anhydride thereof
77 With monohydric alcohol
78 **Poly-, hydroxy- or amino-carboxylic acid reaction products (e. g., nylon)**
79 **Sulfurized**
80 **Polymerized unsaturated compounds**
81 Coumarone-indene resins
82 Cracked petroleum distillate
83 Polyacrylyl or polyalkacrylyl
84 Interpolymers
84.5 With diolefines or cyclo- or halo-diolefines
85 Polyvinyl
86 Interpolymers
86.5 With diolefines or cyclo- or halo-diolefines
87 From vinylcarboxylate
88 From vinylhalide
90 Polyvinyl alcohol or ether
91 From styrenes
92 From acetylenes
92.5 From vinylidene compounds
92.6 From polyene compounds
92.7 Halo-butadienes (e. g., chloroprene)
93 Diolefines (e. g., synthetic rubber)
94 From mono-olefines

260. CHEMISTRY, CARBON COMPOUNDS—Con.
SYNTHETIC RESINS
Polymerized unsaturated compounds
From mono-olefines
94.5 With sulfoxy compound
95 **Processes**
96 Subsequent treatments
97 to 708 follow subclass 822
709 VULCANIZABLE NATURAL HYDROCARBON GUMS
710 **Reclaiming waste or sulfurized rubber**
711 With acidic compound
712 With inorganic base
713 With solvent or dispersing medium
714 With flux, solvent or dispersing medium
715 With added desulfurizing agent
716 Fat, fatty oil, fatty oil acid or salt thereof
717 Natural resin or terpene compounds
718 Wax, bituminous material or tarry residue
719 Hydrocarbon
720 With heat and/or pressure
721 With desulfurizing agent
722 **Pore-forming (e. g., sponge rubber)**
723 Latex or rubber dispersions
724 Gas-evolving agent
725 Gas
726 **Mixtures and processes of preparing same**
727 Two or more different kinds of rubber
728 Natural latex or rubber dispersion containing
729 Reclaimed or sulfurized rubber containing
730 Reclaimed or sulfurized rubber containing
731 With fat, fatty oil, fatty oil acid or salt thereof
732 With natural resin or terpene compound
733 With wax, bituminous material, or tarry residue
734 Condensed or isomerized rubber containing (e. g., cyclo-rubber)
735 Rubber halide or hydrohalide containing
736 With fat, fatty oil, fatty oil acid or salt thereof
737 With natural resin or terpene compound
738 With filler, dye or pigment

260. CHEMISTRY, CARBON COMPOUNDS—Con.
VULCANIZABLE NATURAL HYDROCARBON GUMS
Mixtures and processes of preparing same
739 Natural latex or rubber dispersion containing
740 With protein or derivative
741 With filler, dye or pigment
742 With carbohydrate or derivative
743 With fat, fatty oil, fatty oil acid or salt thereof
744 With natural resin or terpene compound
745 With wax, bituminous material or tarry residue
746 With filler, dye or pigment
747 With protein or derivative
748 Leather, hair or feathers
749 With carbohydrate or derivative
750 Cellulose or derivative
751 Cellulose ether or ester
752 With fat, fatty oil, fatty oil acid or salt thereof
753 With natural resin or terpene compound
754 With filler, dye or pigment
755 With natural resin or derivative
756 With filler, dye or pigment
757 With wax
758 With bituminous material or tarry residue
759 With hydrocarbon (including mineral oil or distillates thereof)
760 With solvent or dispersing medium
761 With flux or plasticizer
762 With filler, dye or pigment
763 Elemental carbon
764 Organic dyestuffs
765 Inorganic non-metallic material
766 With preliminary treatment
767 Processes
768 **Reaction products and processes for preparing same**
769 With sulfonyl compounds
770 With halogen compounds of amphoteric metals
771 Hydrohalogenated (e. g., rubber hydrochloride)

260. CHEMISTRY, CARBON COMPOUNDS—Con.
VULCANIZABLE NATURAL HYDROCARBON GUMS
Reaction products and processes for preparing same
772 Halogenated
773 Oxidized
774 Selenized or tellurized
775 Sulfurized (vulcanized)
776 Dispersions (e. g., latex)
777 By treatment with sulfur chloride
778 By treatment with H_2S
779 With accelerator
780 With retarder
781 Nitroso compounds
782 Acid, acid anhydride or salt
783 Organic compound containing
784 Heterocyclic
785 Thiazoles
786 With other heterocyclic nucleus
787 Non-oxo-carbonylic
788 Amino
789 Guanidines
790 Amine- or ammonia-oxo reaction product
791 Azines
792 Six-membered rings with 1 hetero-N-atom
793 C S S-containing
794 Thioureas or ureas
795 Amino
796 Amine- or ammonia-oxo reaction product
797 Guanidines
798 Secondary or tertiary amines
799 With anti-oxidant or age-resister
800 Heterocyclic
801 Amino
802 Amine- or ammonia-oxo reaction products
803 With phenols or phenoxides
804 Amine- or ammonia-aldehyde reaction products

260. CHEMISTRY, CARBON COMPOUNDS—Con.
VULCANIZABLE NATURAL HYDROCARBON GUMS
Reaction products and processes for preparing same
Sulfurized (vulcanized)
With anti-oxidant or age-resister
Amino
805 Aromatic
806 Nitrogen to nitrogen linkage
807 Polyarylmethyl
808 Carbonylic or oxy
809 Secondary or tertiary amines
810 Carbonylic or oxy
811 Regulatory processes
812 Gas or vapor treatment
813 Molten or liquid bath treatment
814 With preserving, thickening, coagulating or purifying agent
815 Latex
816 Physical treatments (including chemical treatment of non-rubber material)
817 Protein removal or conversion
818 Resin removal or conversion
819 Latex
820 Preserving or stabilizing
821 Coagulating
822 Concentrating (e. g., creaming)
97 NATURAL RESINS AND REACTION PRODUCTS
97.5 Talloil and reaction products thereof
98 Sulfur containing
99 Oxidized
100 Hydrogenated (includes abietyl alcohol)
101 Reaction products with terpenes and/or polycarboxylic anhydrides
102 Reaction products with ammonia, amido or amino compounds
103 Esters of natural resin acids
104 With polyhydric alcohol (e. g., ester gum)
105 Salts of natural resin acids

260. CHEMISTRY, CARBON COMPOUNDS—Con.
NATURAL RESINS AND REACTION PRODUCTS
106 Pyrolytic or heat isomerized products (e. g., rosin oil)
107 Purification, preservation or recovery
108 Resins of pine origin
109 Oleoresin
110 Extraction from cut wood
111 Treatment with immiscible solvents
112 PROTEINS AND REACTION PRODUCTS
113 Heavy metal or aluminum containing
114 Silver
115 Iron
117 Gelatine, glue and reaction products
118 Purification or recovery
119 Casein and reaction products
120 Purification or recovery
121 Albumin and reaction products
122 Purification or recovery
123 Zein and reaction products
124 LIGNINS AND REACTION PRODUCTS THEREOF
125 SULFURIZED CARBON COMPOUNDS OF UNDETERMINED CONSTITUTION
126 From carbohydrates
127 From azo or azoxy compounds
128 From heterocyclic compounds
129 From diazines
130 From pyrrols
131 From anthrones or anthraquinones
132 From amines
133 From dicarbocylic-amines
134 From p-hydroxy-diphenylamines
135 From mixed amines
136 From aminophenols
137 From phenols
138 From nitro-compounds
139 From hydrocarbons
140 DIAZOAMINO

260. CHEMISTRY, CARBON COMPOUNDS—Con.
141 DIAZO, DIAZONIUM, DIAZOTATE OR DIAZO-OXIDE
142 Heavy metal or aluminum containing
143 AZOXY
144 AZO.
145 Heavy metal or aluminum containing
146 Heterocyclic
147 Pyrazol
148 Disazo
149 Monoazo
150 Naphthylazonaphthyl
151 Phenylazonaphthyl
152 Heterocyclic
153 Triazine
154 Diazine
155 Quinoline
156 Pyridine
157 Azole
158 Thiazole
159 Pyrazole
160 Disazo
161 From diazotized benzidines
162 Monoazo
163 From monocyclic diazo component
164 Carbazole
165 Indole
166 Tetrakisazo
167 Urea type
168 From diazotized benzidines
169 Trisazo
170 From diazotized benzidines
171 With 1, 8-aminonaphthol-disulfonyl as intermediate component
172 Non-oxo-carbonylic
173 Non-oxo-carbonylic
174 Disazo
175 Urea type
176 With active methylene coupling component

260. CHEMISTRY, CARBON COMPOUNDS—Con.
AZO
Disazo
177 From tetrazotized diamines
178 Diaminodiaryl
179 Polyarylmethyl
180 Benzidines
181 Non-oxo-carbonylic
182 Dinaphthyl
183 Unsymmetrical
184 Primary
185 Mono-naphthyl middle component
186 Secondary
187 Non-oxo-carbonylic
188 2, 3-hydroxyaryl-carbonylamides
189 Naphthylazonaphthylazonaphthyl
190 Phenylazonaphthylazonaphthyl
191 Phenylazophenylazonaphthyl
192 Monoazo
193 With active methylene coupling component
194 Naphthylazonaphthyl
195 Beta-naphtholic
196 Naphthylazophenyl
197 Naphthol
198 Amino-naphthol
199 Non-oxo-carbonylic
200 Sulfo-naphthol
201 Non-oxo-carbonylic
202 Non-oxo-carbonylic
203 2, 3-hydroxynaphthoic acid amides
204 From monocyclic diazo component
205 Phenylazophenyl
206 Phenolic-oxy
207 Non-oxo-carbonylic
208 Subsequent treatment
209 CARBOHYDRATES AND DERIVATIVES
209.5 Pectins and reaction products
209.6 Algins and reaction products (e. g., alginic acid)
210 Glycosides (e. g., glucosides)
211 Amines (e. g., glucamines)

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOHYDRATES AND DERIVATIVES
212 Cellulose and derivatives
213 Hetero-N-atom
214 Esters
215 Sulfur-containing acid
216 Thiocarbonic or thiocarboxylic
217 Production of viscose
218 Subsequent treatment
219 Phosphorus-containing acid
220 Nitrates
221 Mixed esters
222 With preliminary treatment of cellulose
223 Subsequent treatment
224 Carboxylic
225 Mixed carboxylate esters
226 Ether-esters
227 Acids of acetic series
228 Formates
229 With preliminary treatment of cellulose
230 Subsequent treatment
231 Ethers
232 Subsequent treatment
233 Alkali cellulose
234 Esters
235 Nitrates
236 ALKALOIDS OF UNDETERMINED CONSTITUTION
236.5 EXTRACTS OR ESSENCES OF UNDETERMINED CONSTITUTION
236.6 Essential oils and reaction products thereof
237 HEXAMETHYLENETETRAMINES AND ADDITION COMPOUNDS THEREOF
238 Production of hexamethylenetetramine
239 HETEROCYCLIC CARBON COMPOUNDS
239.5 Cyclopentanohydrophenanthrene nucleus containing
239.6 Para-N-benzenesulfoxy-X (X=C or N)
240 Intercyclic acyclic methine linkage (e. g., polymethines and azomethines)

260. CHEMISTRY, CARBON COMPOUNDS—Con.
HETEROCYCLIC CARBON COMPOUNDS
241 Azines
242 Heavy metal or aluminum containing
243 Thiazines
244 Oxazines
245 Gallocyanines
246 Dioxazines
247 Morpholines
248 Triazines
249 Anthrone or anthraquinone nuclei
249.5 Extracyclic nuclear amino (e. g., melamine)
250 Diazines
251 Pyrimidines
252 Purines or xanthines
253 Addition compounds
254 Halogen
255 2, 6, 8-triketopurines
256 2, 6-diketopurines
257 2, 4, 6-triketopyrimidines (e. g., barbituric acids)
258 Addition or double compounds
259 With pyrazolones
260 Diketopyrimidines (e. g., thiobarituric acids)
261 Anthrone or anthraquinone nuclei
262 Anthrone or anthraquinone nuclei
263 Indanthrenes
264 Sulfoxy
265 Halogen
266 Benzophenazines
267 Phenazines
268 Piperazines
269 Six-membered rings containing one hetero-N-atom
270 Heavy metal or aluminum containing
271 Arsenic
272 Anthrone or anthraquinone nuclei
273 Flavanthrone
274 Acridine nucleus
275 Condensed with pyrazolanthrone nucleus
276 Acridone nucleus

260. CHEMISTRY, CARBON COMPOUNDS—Con.
HETEROCYCLIC CARBON COMPOUNDS

Six-membered rings containing one hetero-N-atom
Anthrone or anthraquinone nuclei
Acridine nucleus
Acridone nucleus
277 Halogen
278 Anthrapyridones
279 Acridines
280 From acetylene
281 Polycarboxylic acid imides
282 Imidazoles
283 Quinolines or isoquinolines
284 Cinchona alkaloids
285 Opium alkaloids
286 Addition compounds
287 Non-oxo carbonylic
288 Amino
289 Oxo or oxy
290 Pyridines
291 Tobacco alkaloids (e. g., nicotine)
292 Solanum alkaloids (e. g., atropine)
293 Piperidines
294 Non-oxo carbonylic
295 Non-oxo carbonylic
295.5 Beta-positioned (e. g., nicotinic acid)
296 Amino
297 Oxo or oxy
297.5 2-alkyl, 3-oxy, 4, 5-di-oxyalkyl (e. g., vitamin B_6)
298 **Azoles**
299 Heavy metal or aluminum containing
300 Arsenic
301 Sulfoneazoles (e. g., saccharin)
302 Thiazoles
303 Anthrone or anthraquinone nuclei
304 Arylenethiazoles
305 1-Amino
306 1-Thio
306.5 1-S to S linkage (persulfides)
306.6 1-S-nitrogenous radical

260. CHEMISTRY, CARBON COMPOUNDS—Con.
HETEROCYCLIC CARBON COMPOUNDS

Azoles
307 Oxazoles
307.5 Anthrone or anthraquinone nuclei
308 Tri- or tetrazoles
309 Diazoles
309.5 2, 4-di-C=X (X=O or S, e. g., hydantoin)
309.6 Imidazolines
310 Pyrazoles
311 Addition compounds
312 Anthrone or anthraquinone nuclei
313 **Pyrrols**
314 Intracyclic tetra-pyrryl (e. g., porphyrins)
314.5 Phthalocyanines
315 Carbazoles
316 Anthrone or anthraquinone nuclei
317 Carbazole-indophenols
318 Recovery or purification of carbazoles
319 Indoles
320 From arylglycines
321 Indigoid
322 Thiophene nucleus
323 Indigo
324 Halogen
325 Cyclic imides (e. g., isatin)
326 Dicarboxylic acid imides (e. g., phthalimides)
327 **Hetero-S-atom**
328 Thioxanthenes or thioxanthones
329 Thiophenes
330 Thioindoles
331 Thioindigoid
332 Halogen
333 **Hetero-O-atom**
335 Xanthenes or xanthones (e. g., flourescein)
336 Rhodamines
337 Phthaleins
338 Poly-hetero-oxygen
339 Ozonides
340 Polymerized aldehydes

260. CHEMISTRY, CARBON COMPOUNDS—Con.
HETEROCYCLIC CARBON COMPOUNDS

Hetero-O-atom
341 Polycarboxylic acid anhydrides
342 Oxidation of aromatic compounds
342.4 Condensation products of unsaturated acid anhydrides (e. g., diene synthesis)
342.5 Phthalic anhydride
342.6 Anhydrides of acyclic polycarboxylic acids
344 Intracyclic carbonyl-oxy (e. g., lactones)
344.5 Ascorbic acids (e. g., vitamin C)
344.6 Fused carbocyclic nucleus containing
345 Furyl
346 Benzofuranes
347 Production of furfural
348 Epoxy (e. g., ethylene oxide)
348.5 By oxidation of olefines
348.6 By dehalogenation
349 NITROCYCLIC (E. G., AZIDES)
350 CARBOCYCLIC OR ACYCLIC
351 **Anthrones or anthranols**
352 Benzanthrones
353 Dibenzanthrones or isodibenzanthrones
354 Amino
355 Oxy (non-leuco)
356 Halogen
357 Dibenzanthrone
358 Isodibenzanthrone
359 Anthanthrones
360 Pyranthrones
361 Benz-dianthrones
362 Benzopyrenequinones
363 Polybenzanthronyl compounds
364 Benzanthronyl compounds
365 **Diarylene ortho-diketones (including leuco forms thereof)**
366 Heavy metal or aluminum containing
367 Polyanthraquinonyl
368 Extracyclic carbonyl
369 Anthraquinonyl

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Diarylene ortho-diketones (including leuco forms thereof)
Anthraquinonyl
370 Sulfonyl
371 Amino
372 Extracyclic carbonyl
373 Oxy
374 N-aryl
375 Oxy
376 Extracyclic carbonyl
377 Amido
378 Amines
379 N-oxyalkyl
380 Oxy
381 Halogen
382 By ammonolysis
383 Oxy
384 Halogen
385 By oxidation of anthracene
386 **Triarylmethanes**
387 Heavy metal or aluminum containing
388 Diphenylnaphthylmethanes
389 Triphenylmethanes
390 Amino
391 Triaminotriphenylmethanes (e. g., rosanilines)
392 Sulfonyl
393 Diaminotriphenylmethanes (e. g., malachite greens)
394 Sulfonyl
395 Oxy (e. g., aurines)
396 **Quinones**
397 **Cyclopentanohydrophenanthrenes**
397.1 Non-oxo-carbonylic (e. g., bile acids)
397.2 Sterols (including vitamin D)
397.3 Oxo

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Cyclopentanohydrophenanthrenes
Oxo
397.4 Oxy
397.5 Oxy
397.6 **Para-N-benzenesulfoxy-X (X=C or N)**
397.7 Sulfonamides (e. g., sulfanilamide)
398 **Fats, fatty oils, ester-type waxes or higher fatty acids**
398.5 With preservative
399 Sulfur containing
400 Sulfoxy containing
401 Amino or amido containing
402 Aryl nucleus containing
402.5 Nitrogen containing
403 Phosphorus containing (e. g., lecithin)
404 Nitrogen containing
404.5 Poly-nitrogen containing
404.8 Reaction products with polycarboxylic compounds
405 Acylated
405.5 Unsaturation
405.6 Isomerization
406 Oxidized
407 Polymerized
408 Halogen containing
409 Hydrogenated
410 Synthetically produced higher fatty esters
410.5 With phenols or aromatic alcohols
410.6 With acyclic polyoxy alcohols
410.7 Glycerides
410.8 With non-higher-fatty monocarboxylic acid
410.9 With acyclic monohydric alcohol
412 Recovery or extraction from residues or organic materials
412.1 From fish livers
412.2 From legumes, nuts or seeds
412.3 With acidic or basic material
412.4 Solvent extraction

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Fats, fatty oils, ester-type waxes or higher fatty acids
Recovery or extraction from residues or organic materials
412.5 Foots, textile treating liquors, absorbents, sludges or industrial wastes
412.6 Rendering
412.7 With acidic or basic material
412.8 Solvent extraction
413 Higher fatty acids or their salts
414 Heavy metal or aluminum containing
415 By hydrolysis of fats, oils, waxes or esters
416 With organic sulfonic acids
417 With alkali-forming metal compound
418 With subsequent treatment
419 Purification
420 Purification of fats, oils and waxes
421 By esterification of free fatty acids
423 By treatment with oxidizing agents
424 By treatment with acid, acid anhydride or acid salt
425 By treatment with basic substance
426 With organic solvent
427 With solid absorbent
428 By physical treatment only
428.5 With solvent
429 **Heavy metal containing**
430 Gold or silver
431 Mercury
432 With other heavy metal
433 Aromatic
434 Carbonylic
435 Lead
436 Acetates
437 C-Pb (e. g., plumbanes)
438 Copper or chromium
439 Iron, nickel or cobalt

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Heavy metal containing
440 Arsenic
441 With other heavy metal
442 Arsonic acids
443 Carbonylic
444 Arseno
445 Carbonylic
446 Antimony
447 Bismuth
448 **Aluminum containing**
449 **Hydrogenation of carbon oxides and products thereof**
449.5 Methanol synthesis
449.6 Production of hydrocarbons (e. g., Fischer-Tropf synthesis)
450 With subsequent treatment
451 **Partial oxidation of non-aromatic hydrocarbon mixtures and products thereof**
452 With subsequent treatment
453 **Esters and processes of making same**
454 Thiocyanic acid or isothiocyanic acid
455 Thiocarbonic acid or thiocarboxylic acid
456 Sulfoxy acid
457 Sulfuric acid
458 Acyclic
459 Unsubstituted alkyl
460 From olefines
461 Phosphorus-containing acid
462 Boron- or silicon-containing acid
463 Carbonic or chlorcarbonic acid
464 Nitrile or isonitrile
465 Aromatic
466 Nitric or nitrous acid
467 Acyclic nitrates
468 Carboxylic acid
469 Aromatic
470 Sulfur-containing
471 Amino or nitro

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Esters and processes of making same
Carboxylic acid
Aromatic
Amino or nitro
472 Alkamine
473 Oxy
473.5 Tannins and reaction products thereof
473.6 With extraction from bark or vegetable material
474 Salicylic acid
475 Polycarboxylic acid
476 Monocyclic
477 Alkamine
478 Acyclic
479 With phenols
480 Salicylic acid (e. g., aspirin)
481 Sulfur-containing
482 Amino
483 Oxo
484 Oxy
485 Polycarboxylic acid
486 Unsaturated acid
487 Halogenated acid;
488 Unsubstituted acids of the acetic series
489 With terpenes
490 Alkamine (e. g., choline acetate)
491 Esters from esters
492 From alkyl sulfates
493 From alkyl halides
494 Esters from aldehydes
495 Esters by dehydrogenation of alcohols
496 Esters from ethers
497 Esters from olefines
498 Esters from acetylene
499 Purification or recovery
500 **Acids or salts thereof**
501 Amine addition salts (including betaines)
502 Peroxide

260. CHEMISTRY. CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Acids or salts thereof
503 Sulfonic acids
504 Sulfonation products of non-aromatic hydrocarbon mixtures
505 Aromatic
506 Diaminomethylene
507 Non-oxo-carbonylic
508 Amino
509 Oxy
510 Polyamino
511 Oxo
512 Oxy
513 Acyclic
514 Carboxylic acids
515 Aromatic
516 Bivalent sulfur containing
517 Diarylketones
518 Amino
519 Oxy
520 Oxy
521 Monocyclic
522 Decarboxylation of polycarboxylic acids
523 Oxidation of aromatic compounds
524 Side chain alkyl (e. g., toluene)
525 Purification or recovery
526 Acyclic
527 From sources of undetermined composition
528 From carbohydrates
529 From proteins
530 Oxidation of aldehydes
531 From alcohols or alcoholates
532 With carbon monoxide
533 From hydrocarbons
534 Amino
535 Oxy
536 Tartaric acid
537 Polycarboxylic
538 Oxalic

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Acids or salts thereof
Carboxylic acids
Acyclic
539 Halogen
540 Saturated lower fatty acids
541 Acetic acid
542 Formic acid
543 **Acid halides**
544 Carboxylic
545 **Acid anhydrides**
546 Carboxylic only
547 Vapor phase pyrolysis of corresponding acids
548 From salts of corresponding acids
549 From carboxylic acid esters
550 Ketenes
551 **Amides**
552 Thioureas
553 Ureas
554 Carbazides or semi-carbazides
555 Urea
556 Sulfonic acid
557 Carboxylic acid
558 Aromatic
559 Oxy
560 2, 3-hydroxynaphthoic acid
561 Acyclic
562 Arylamides
563 **Amines**
564 Amidines
565 N-aryl guanidines
566 Azomethines or ketimines or oximes
567 Thiocarbamyl (e. g., thiuram disulfide)
568 Aromatic
569 Hydrazo or hydrazino
570 Intercyclic methylene or carbonyl group
570.5 Non-nuclear amino
570.6 Oxy-amino-alkyl (e. g., ephedrine)
570.7 Amino-alkyl-oxy

260. CHEMISTRY. CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Amines
Aromatic
Non-nuclear amino
570.8 Amino-unsubstituted alkylene
570.9 Amino-methylene
571 Oxy
573 Oxy-alkyl amino
574 Less than 12 nuclear carbons (e. g., Metol)
575 Nuclear primary amino only
576 Secondary or tertiary
577 Less than 12 nuclear carbons
578 Primary
579 Addition compounds (e. g., aniline hydrochloride)
580 By reduction of NO_2 or NO
581 By ammonolysis
582 Purification or recovery
583 Acyclic
584 Oxo or oxy
585 By ammonolysis
586 **Ketones**
587 Terpene
588 Camphor
589 Purification or recovery
590 Aromatic
591 Intercyclic keto
592 Arylalkyl keto
593 Acyclic
594 Oxy
595 From carboxylic acids, salts or esters thereof
596 By dehydrogenation or dehydration of alcohols
597 From hydrocarbons
598 **Aldehydes**
599 Aromatic
600 Phenolic oxy (e. g., vanillin)
601 Acyclic
602 Oxy
603 By dehydrogenation or dehydration of alcohols

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Aldehydes
Acyclic
604 From hydrocarbons
605 From acetylene
606 Formaldehyde
607 **S, Se, Te, Si, P or B containing**
608 Persulfides
609 Mercaptans, mercaptides or thio ethers
610 **Peroxides or oxonium**
611 **Ethers**
611.5 With preservative
612 Phenol
613 Poly-oxy
614 Acyclic
615 Poly-oxy
616 Purification or recovery
617 **Hydroxy**
618 Aromatic
619 Phenols
620 Diphenyl
621 Less than 12 nuclear carbons
622 Nitro
623 Halogen
624 C-polycarbon alkyl
625 Polyhydric phenols
626 C-isopropyl or -isopropylene
627 Recovery from industrial wastes
628 From aryl sulfonates
629 By hydrolysis of aryl halides
631 Cyclohexanols (including menthols)
631.5 Terpene derived
632 Acyclic
632.5 With preservative
633 Halogen
634 From olefines
635 Polyhydric
636 By hydrolysis of alkyl polyhalides or halohydrins
637 Purification or recovery

260. CHEMISTRY. CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

Hydroxy
Acyclic
638 From carbonyl-containing compounds
639 By hydrolysis of alkyl esters of polybasic inorganic acids
640 By hydrolysis of alkyl halides
641 By hydration of olefines
642 From alcohols
643 Purification or recovery
644 **Nitro**
645 Aromatic
646 Halogen
647 **Nitroso**
648 **Halogenated hydrocarbons**
649 Aromatic
650 Less than 12 nuclear carbons
651 C-haloalkyl
652 Acyclic
652.5 With-preservative
653 Fluorine-containing
654 Unsaturated
655 Halo-butadienes
656 Vinyl halides
657 From alcohols or ethers and hydrogen halides
658 From acyclic halides
659 From hydrocarbons
660 By reaction with chlorine or bromine
662 Vapor phase
663 By hydrohalogenation of unsaturated hydrocarbons
664 Production of polyhalogenmethanes (e. g., chloroform)

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

665 **C-metal**
666 **Hydrocarbons**
666.5 With preservative
667 Hydrogenation of aromatic compounds
668 Aromatic
669 C-vinyl (e. g., styrenes)
670 Condensation of aromatic hydrocarbons only
671 Introduction of acyclic side chains (e. g., alkylation)
672 Dealkylation
673 From acyclic hydrocarbons
673.5 Six or more carbons in molecule
674 Purification or recovery
675 Anthracene or phenanthrene
675.5 Cyclic terpenes
676 Acyclic
677 Unsaturated
678 Triple bond
679 Acetylene
680 Diolefines
681 From oxygen containing compounds
681.5 Purification or recovery
682 Olefines from oxygen containing compounds
683 Olefines from hydrocarbons
683.1 By polymerization of olefines
683.15 Catalytic
683.2 With isomerization
683.3 By dehydrogenation
683.4 Alkylation or condensation
683.5 With isomerization
683.6 With hydrogenation

260. CHEMISTRY, CARBON COMPOUNDS—Con.
CARBOCYCLIC OR ACYCLIC

684 **PROCESSES**
685 **Sulfurization**
686 **Sulfonation or sulfation**
687 **Oxidation**
688 **Nitration**
689 **Reduction of nitro, nitroso or azomethine groups**
690 **Hydrogenation**
691 **Acylation**
692 **Etherification**
693 **Fusion with alkalis**
694 **Halogenation**
695 **Polymerization**
696 **Unsaturation (e. g., by dehydrogenation)**
698 **Regulatory**
699 Repression of by-products
700 Temperature control
701 **Chemical purification**
702 Oxidation of impurities
703 Separation from sulfuric acid solution
704 **Physical treatments only**
705 With extraction
706 With sublimation
707 With crystallization
708 With adsorption (e. g., decolorizing or deodorizing)
709 to 822 follow subclass 96

261 GAS AND LIQUID CONTACT APPARATUS.

1 **Miscellaneous**
2 **With liquid separations**
3 In circuit
4 On inlet
5 Filtering
6 Unitary structure
7 Decanting
8 Unitary structure
9 **With heating or cooling**
10 Interchanging
11 Cooling
12 Heating
13 Gas
14 Incoming
15 Liquid
16 **Multiple gas**
17 Furnace-gas type
18 **Multiple liquids**
19 **Fluid distribution**
20 Systems
21 Series
22 Gas connections
23 Parallel
24 Pumping
25 Liquid operated
26 Automatic control
27 Liquid inlet
28 Gas and liquid
29 Liquid circuit
30 Gas inlet
31 Churn type
32 Rotary dasher
33 Reciprocating dasher
34 Liquid
35 Gas operated
36 In circuit
37 Inlet

261. GAS AND LIQUID CONTACT APPARATUS—Continued.

Fluid distribution
38 Valved
39 Thermostatic
40 Multiple jet
41 Progressive
42 Multiple valves
43 Connected
44 Contact space
45 Gas by-pass
46 With gas inlet
47 With gas outlet
48 With liquid inlet
49 Liquid inlet
50 With gas inlet
51 With gas outlet
52 Gas inlet and outlet
53 Contact space
54 Gas by-pass
55 With gas inlet
56 With gas outlet
57 With liquid inlet
58 Liquid inlet
59 With gas inlet
60 With gas outlet
61 Gas inlet and outlet
62 Contact space
63 Gas by-pass
64 Gas inlet
65 Gas outlet
66 Liquid inlet
67 Plural
68 Float and manual
69 Gas-pressure controlled
70 Float controlled
71 Manual
72 Liquid-supply tank
73 Barometric
74 Contact receptacle

261. GAS AND LIQUID CONTACT APPARATUS—Continued.

75 **Contact devices**
76 Injector type
77 Submerged blast
78 Atomizer type
79 Rotating gases
80 Traveling strip
81 Reciprocating
82 Piston
83 Rotating
84 Impeller
85 Hollow shaft
86 Gas trapping
87 Gas delivering
88 Liquid spraying
89 Sprayed
90 Horizontal axis
91 Dipping
92 Horizontal axis
93 Submerged blast
94 Porous mass
95 Surface contact
96 Gas-flow control
97 Liquid-flow control
98 Spray
99 Capillary feed
100 Porous sheet
101 Surface contact
102 Gas-flow control
103 Liquid downflow
104 Capillary feed
105 Gas-flow control
106 Liquid downflow
107 Capillary feed
108 Wet baffle
109 Gas-flow control
110 Liquid-flow control
111 Spray
112 Film

261. GAS AND LIQUID CONTACT APPARATUS—Continued.

Contact devices
Wet baffle
113 Perforated baffles
114 Overflow baffles
115 Liquid spray
116 Aspirating
117 Opposed
118 Transverse
119 Liquid tank
120 Floating distributor
121 Submerged blast
122 Submerged screen
123 Submerged baffle
124 Multiple jet
125 Multiple receptacle
126 Upflowing gases

262 MINING, QUARRYING, AND ICE HARVESTING.

1 **Miscellaneous.**
2 **Excavating and separating.**
3 **Thermal or solvent.**
4 **Tunnel excavating**
5 Implements
6 Impact,
7 Rotary.
8 **Implements**
9 Plural-type tools,
10 Ice-shave type
11 Grooving,
12 Breaking down,
13 Impact tool
14 Swinging pick,
15 Sliding guided
16 Swinging guide,
17 Rocking-arm actuated,
18 Crank actuated,
19 Rotary tool
20 Vertical-kerf cutter
21 Rectangular cutter arrangement,
22 Drill,
23 Bar cutter
24 Front cut,
25 Side cut,
26 Front cut,
27 Side cut,
28 Endless flexible cutter
29 Front cut,
30 Side cut,
31 Reciprocating cutter
32 Double cut.
33 **Bits, cutters, or picks.**
34 **Mine safety systems.**

263 HEATING.

1 **Miscellaneous.**
2 **Articles**
3 Continuous strip,
4 Circular
5 Fluid fuel,
6 Work manipulation
7 Rotary carrier,
8 Endless carrier,
9 Fluid fuel.
10 **Furnaces**
11 Pot
12 Rotary
13 Fluid fuel,
14 Fluid fuel,
15 With gas heater
16 Rotary chamber,
17 Multiple chamber
18 Externally heated,
19 Gas heating
20 Separate flues,
21 Agitating
22 Rotary chamber,
23 Reciprocating stirrer,
24 Endless stirrer
25 Rotary stirrer
26 Vertical,
27 Combined shaft and hearth,
28 Traveling support,
29 Shaft
30 Baffle
31 Moving,
32 Rotary chamber
33 Single
34 Externally heated.
35 Vertical,
36 Multiple chamber
37 Externally heated
38 Fluid fuel,

263. HEATING—Continued.

Furnaces
Multiple chamber
39 Fluid fuel.
40 Single chamber
41 Externally heated
42 Fluid fuel,
43 Fluid fuel,
44 Cooling,
45 Waste receptacle,
46 Masonry structure.
47 **Receptacles**
48 Pots,
49 Boxes.
50 **Heat screens.**
51 **Checker bricks.**
52 **Processes**
53 Lime, gypsum and cement.

264 SPEED-RESPONSIVE DEVICES.

1 **Miscellaneous.**
2 **With driving mechanism.**
3 **With modifiers**
4 Automatic
5 Differential
6 Inertia,
7 Fluid pressure,
8 Electric,
9 **Differential**
10 Brake,
11 Inertia.
12 **Resistance**
13 Clutch,
14 Fluid pressure.
15 **Centrifugal**
16 Parallel pivot,
17 Guided,
18 Spring support,
19 Fluid,
20 Balanced.
21 **Intermittent impulse.**

265 FORCE-MEASURING.

1 **Miscellaneous.**
1.4 **Gravational determination**
1.5 Torsion balances.
1.6 **Deflection tensiometers.**
2 **Recording**
Strength of material
3 Beam-scale instruments,
4 Torque during transmission,
5 Scales
6 Beam
7 Automatically slidable poise,
8 Spring
9 Automatic.
10 **Friction.**
11 **Viscosity.**
12 **Strength of material**
13 By impact or shock,
14 Fluid-transmission instruments,
15 Accumulative-weight instruments,
16 Beam-scale instruments,
17 Pendulum-scale instruments,
18 Spring-scale instruments
19 Pivotal indicator.
20 **Muscular strength**
21 Spring-scale instruments
22 Pivotal indicator.
23 **Current pressure.**
24 **Torque by absorption.**
25 **Torque during transmission**
26 Total registering.
27 **Scales**
28 Total registering,
29 Computing
30 Beam
Slidable poise
31 Pivotal indicator,
32 Changeable table,

265. FORCE-MEASURING—Continued.
Scales
Computing
Beam
33 Variable connection
34 Shiftable beam,
35 Shiftable load holder
36 Pendulum
Pivotal indicator
37 Indirect connection,
38 Spring
39 Pivotal indicator,
40 Vehicle
Beam
41 Relievable platform,
Spring
42 Pivotal indicator,
43 Buoyancy
44 Specific gravity
45 Hydrometers
46 With thermometer attachment,
47 Fluid transmission,
48 Automatic weight pick-up,
49 Beam
50 Coin testers,
51 Sack,
52 Hoisting load holder,
53 Variable connection.
54 Equal arm,
55 With platform,
56 Automatically slidable poise,
Slidable poise
57 Pivotal indicator,
58 Auxiliary or substitute indicator
Spring
59 Pivotal indicator,
60 Nonslidable-poise feature,

265. FORCE-MEASURING—Continued.
Scales
61 Pendulum
Pivotal indicator
62 Indirect connection,
63 Spring
64 Refrigerator
65 Pivotal indicator,
66 Handling load holder
67 Pivotal indicator,
68 Pivotal indicator,
69 Thermal compensator,
70 Automatic poise,
71 Platforms
72 With relieving gear.

266 METALLURGICAL APPARATUS.

1 **Miscellaneous.**
2 **Treating solid metal**
3 Continuous strip,
4 With heat and liquid,
5 With heat,
6 With liquid
7 Pickling.
8 **Treating with heat and liquid.**
9 **Combined operation**
10 Roasting and smelting,
11 Smelting and refining,
12 Leaching and precipitating.
13 **Plants.**
14 **With gas heater.**
15 **With fume arrester**
16 Heating furnace
17 Shaft,
18 Rotary chamber,
19 Retort.
20 **Roasting.**
21 Grate.
22 **Precipitating.**
23 **Blowpipes.**
24 **Furnaces**
25 Shaft
26 Explosion control,
27 Charging
28 Pneumatic,
29 Feeding fluids
30 Air,
31 Tops and offtakes,
32 Cooling,
33 Melting.

266. METALLURGICAL APPARATUS—Continued.

34 **Treating molten material**
35 Converters
36 Rotary,
37 Separating,
38 Discharging,
39 Receptacles,
40 **Forehearths.**
41 **Tuyeres.**
42 **Plugging and tapping.**
43 **Linings.**

267 SPRING DEVICES.

1 **Miscellaneous.**
2 **Vehicle**
3 Railway
4 Coil,
5 Perambulator,
6 Bolster
7 Leaf,
8 Springs and retarders
9 Friction
10 Flexible strap,
11 Parallel depression
12 Positive connections
13 Duplex
14 Single point,
15 Lever
16 Leaf and coil
17 Leaf-end-connecting lever,
18 Leaf and fluid pressure,
19 Leaf,
20 Coil,
21 Deformable,
22 Compound
23 Leaf, coil, and fluid pressure,
24 Leaf, fluid pressure and liquid,
25 Leaf and torsion
26 Torsion coil
27 Leaf-end connecting,
28 Leaf and coil
29 Leaf-end connecting,
30 Leaf and deformable,
31 Leaf and fluid pressure
32 Leaf-end connecting,
33 Coil and deformable,
34 Coil and fluid pressure,
35 Deformable and fluid pressure,
36 Leaf
37 Covering and lubricating,
38 Twin, axle interposed,

267. SPRING DEVICES—Continued.

Vehicle
Leaf
39 Side bar,
40 Longitudinal,
41 Cantilever,
42 Elliptic,
43 Elliptic and leaf,
44 Semielliptic,
45 Semielliptic and leaf
46 End-to-end connected,
47 Structure
48 Auxiliary tensioning elements,
49 Antifriction,
50 Lubrication,
51 Broken-spring supports,
52 Intermediate supports,
53 Clips,
54 End connections
55 Elliptic,
56 Sliding,
57 Torsion
58 Coil
59 Volute,
60 Coil
61 Structure
62 Volute,
63 Deformable,
64 Fluid pressure and liquid,
65 Fluid pressure,
66 Braces
67 Yielding.
68 Sliding.
69 **Elastic extension devices**
70 Compression spring
71 Single
72 Drawbars inclosed,
73 Tension spring
74 Single.
75 **Reciprocating-bed-cushioning devices.**

268 CLOSURE-OPERATORS.

1 **Miscellaneous.**
2 **Bank protective type.**
Automobile
3 Swinging door,
4 Sliding door.
Cab
5 Door and window,
6 Swinging door,
7 Sliding door,
8 Window.
9 **Silo closure.**
10 **Pit furnace cover.**
11 **Fireman's manhole.**
12 **Light and air shaft.**
13 **Elevator shaft.**
14 **Beef-jack type.**
15 **Fireman's nozzle jet operated closures.**
16 **For plural apertures**
17 Railway car doors,
18 Hatchway,
19 Electric motors,
20 Fluid motor,
21 Swinging window
22 Horizontally reciprocating operator,
23 Vertically reciprocating operator,
24 Link and rock shaft,
25 Racked rod,
26 Reciprocating window,
27 Swinging shutters,
28 Reciprocating shutters.
29 **Gate, railway car.**
30 **Door**
31 Pedal or platform actuated
32 Swinging horizontally
33 Electric motor,
34 Fluid motor,

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268. CLOSURE-OPERATORS—Contd.

Door
Pedal or platform actuated
Swinging horizontally
35 Twin doors,
36 Single door,
37 Swinging vertically,
Reciprocating horizontally
38 Electric motor,
39 Fluid motor,
40 Twin doors,
41 Single door,
42 Reciprocating vertically,
43 Freight car
44 Reciprocating horizontally,
45 Reciprocating vertically,
46 Reciprocating horizontally
47 Opening and closing, time interval,
48 Twin doors
49 Electric motor,
50 Fluid motor,
51 Lapped doors
52 Spring or weight closed,
53 Electric motor,
54 Weight or gravity actuated,
55 Lever actuated
56 Spring or weight closed,
57 Flexible,
58 Reciprocating vertically
59 Electric motor,
60 Flexible,
61 Swinging horizontally
62 Twin doors
63 Electric motor,
64 Fluid motor,
65 Electric motor,
66 Fluid motor,
67 Opening and closing, time interval,

268. CLOSURE-OPERATORS—Contd.

Door
Swinging horizontally
68 Conjoined doors,
69 Spring, weight, or gravity actuated
70 Latch release,
71 Distance actuated, latch release,
72 Starter,
73 Rotary,
74 Swinging vertically
75 Fluid motor,
76 Trap door, outside actuator.

Shutter
77 Horizontally swinging
78 Conjoined twin shutters,
79 Combined shutter and slat,
80 Lever
81 Rock shaft, vertical,
82 Gear and rack,
83 Gear and worm,
84 Gear and gear,
Rock shaft
85 Inclined,
86 Horizontal,
87 Gear and rack,
88 Gear and worm,
89 Gear and scroll,
90 Gear and gear,
91 Screw and nut,
92 Reciprocating rod
93 Inside of hinge,
94 Outside of hinge,
95 Cable,
96 Slat operator,
97 Horizontally reciprocating.
98 **Window or scuttle**
99 Swinging vertically
100 Racked rod,
101 Screw and nut,

268. CLOSURE-OPERATORS—Contd.

Window or scuttle
Swinging vertically
102 Lever,
103 Rod and cable.

Window
104 Swinging vertically
105 Lever, gear and worm,
106 Lever, gear and rack,
107 Gear and rack,
108 Screw and nut,
109 Top hinge
110 Cable and pulley,
111 Vertical operating rod,
112 Bottom hinge
113 Cable and pulley,
114 Vertical operating rod,
115 Intermediate pivot
116 Vertical operating rod,
117 Swinging horizontally
118 Lever
119 Gear and worm,
120 Screw and nut,
121 Rock shaft, vertical,
122 Reciprocating vertically
123 Rain actuated,
124 Electric motor,
125 Fluid motor,
126 Lever operated
127 Lazy tongs,
128 Endless cable,
129 Cable and drum,
130 Cable and pulley,
131 Rack and scroll or worm,
132 Rack and gear,
133 Rack and nut,
134 Pole or rod operated.

269 NO CLASS.

270 SHEET-MATERIAL ASSOCIATING OR FOLDING.

1 **With printing**
2 Folding and wrapping,
3 Rolling and wrapping,
4 Associating and folding, with rotary printer
5 Longitudinal web folding
6 Cylinder collecting, with sheet folding
7 Additional-sheet associating,
8 Sheet folding
9 Additional-sheet associating,
10 Web association with cylinder collecting
11 Additional-sheet associating,
12 Sheet associating
13 Cylinder collecting
14 Additional-sheet associating,
15 Additional-sheet associating,
16 Longitudinal sheet folding,
17 Additional-sheet associating,
18 Associating, with rotary printer
19 Cylinder collecting,
20 Folding, with rotary printer
21 Cutting,
22 Bed and traveling cylinder, web, perfecting.
23 **Folding and wrapping**
24 Combined folders,
25 Oscillating folding blade.
26 Reciprocating folding blade.
27 **Rolling and wrapping**
28 Flattening,
29 Pocket former.
30 **Reciprocating-carriage pilers**
31 Traveling supply.

270. SHEET-MATERIAL ASSOCIATING OR FOLDING—Continued.

32 **Associating and folding**
37 Stapling or stitching
38 Cylinder collecting,
39 Zigzag package
40 Longitudinal web folding,
41 Longitudinal web folding.
42 Cylinder collecting, with sheet folding,
43 Web associating, with cylinder collecting
44 Additional-sheet associating,
45 Sheet associating
46 Stop sheet,
47 Cylinder collecting
48 Additional-sheet associating
49 Revolving pivotal folding blade,
50 Revolving pivotal folding blade,
51 Additional-sheet associating.
52 **Associating**
53 Stapling or stitching,
54 Signature gatherers
55 Insetting
56 Interrupter,
57 Insetting,
58 Sheet associating
59 Stop sheet,
60 Cylinder collecting.
61 **Folders**
62 Combination
63 With revolving blade
64 And longitudinal folder
65 Revolving blade of fold-off-rolls type,
66 With longitudinal folder,

270. SHEET-MATERIAL ASSOCIATING OR FOLDING—Continued.

Folders
Combination
67 Oscillating and reciprocating blades,
68 Buckling,
69 Pneumatic,
70 Revolving blade
71 Registering cylinders
72 Multiple
73 Zigzag,
74 Oscillating blade,
75 Oscillating blade,
76 Fold-off-rolls type
77 Planetary blade,
78 Moving gripper,
79 Oscillating or reciprocating zigzag fold,
80 Oscillating blade
81 Multiple
82 Stacking,
83 Reciprocating blade
84 Multiple
85 Stacking,
86 Longitudinal
93 Edge,
94 Multiple.

271 SHEET OR WEB FEEDING OR DELIVERING.

1 **Special article**
2 Envelope.
2.1 **Web feeding**
2.2 Loopers,
2.3 Rotary
2.4 Intermittent,
2.5 Reciprocating,
2.6 Registering
3 **Feeding and delivering**
4 Separators and conveyors
5 Pneumatic separator,
6 Continuous endless conveyor.
7 Continuous endless conveyors.
8 **Feeding**
9 Multiple supply.
10 Separators and conveyors
11 Pneumatic separator
12 Endless conveyor
13 Side gauge,
14 Reciprocating conveyor,
15 Side gauge,
16 Buckling separator and endless conveyor
17 Side gauge,
18 Separators
19 Buckling
20 Pneumatic,
21 Rotary
22 Pack advancer,
23 Bottom feed,
24 Pack advancer
25 Feeler control,
26 Pneumatic
27 Rotary
28 Pack advancer,
29 Bottom feed,

271. SHEET OR WEB FEEDING OR DELIVERING—Continued.

Feeding
Separators
Pneumatic
30 Pack advancer
31 Feeler control,
32 Bottom feed,
33 Adhesive,
34 Endless belt
35 Bottom feed,
36 Rotary
37 Preliminary protrusion
38 Feeler control,
39 Pack advancer,
40 Feeler control,
41 Bottom feed,
42 Reciprocating
43 Pack advancer,
44 Bottom feed,
45 Endless conveyors
46 Retarder,
47 Interrupter,
48 Side and front gauge,
49 Side gauge,
50 Front gauge,
51 Rotary conveyors
52 Side gauge,
53 Front gauge
54 Reciprocating conveyors
55 Side gauge,
56 Interrupter
57 Electrical,
58 Side and front gauges,
59 Side gauges,
60 Front gauges,
61 Pack holders
62 Advancer
63 **Delivering**
64 Multiple discharge,

271. SHEET OR WEB FEEDING OR DELIVERING—Continued.

Delivering

65 Optional face or back.
66 Endless conveyors to flies,
67 Endless conveyors to curtains,
68 Endless conveyors to depositors,
69 Endless conveyors to other conveyors
70 To flies,
71 Rotary conveyors to depositors,
72 Rotary conveyors to flies,
73 Curtains,
74 Pneumatic conveyors,
75 Endless conveyors
76 Multiple
77 Arrested,
78 Arrested,
79 Suspension gripper,
80 Rotary conveyors
81 Traveling,
82 Suspension gripper,
83 Flies,
84 Reciprocating conveyors
85 Suspension gripper,
86 Pack receivers
87 Retractor
88 Lowering,
89 Jogger.

272 AMUSEMENT AND EXERCISING DEVICES.

1 **Amusement**
2 Houses,
3 Arenas
4 Racing
5 Horse,
6 Elevators
7 Combined roundabouts,
8 Illusions
9 Stage
10 Special projected picture or light effects.
11 Settings
12 Rapid movement,
13 Mirror,
14 Sound imitation,
15 Rain, snow, and fire,
16 Trip simulation
17 In passenger-carrying devices
18 With projected picture scenery,
19 Maze or labyrinth,
20 Pyrotechnic display,
21 Stage appliances
22 Shifting scenery
23 Guides, braces, and clips,
24 Aerial suspension devices,
25 Properties
26 Stage tanks,
27 Initiating devices,
28 Roundabouts
29 Combined with transporting vehicle,
30 Combined seesaw,
31 Toy,
32 Marine,
33 Occupant propelled,
34 Auto-propelled carriages,

272. AMUSEMENT AND EXERCISING DEVICES—Continued.

Amusement

Roundabouts
35 Free carriage,
36 Vertical and horizontal axes.
37 Plural vertical axes.
38 Plural horizontal axes,
39 Vertical axis only
40 Suspended vehicle or rider support
41 Circular swings,
42 With rotating platform,
43 Rotating vehicle or rider support and stationary track or platform
44 Vertically undulating track or platform,
45 Horizontally undulating track or platform,
46 Rotating disk, ring, or bowl
47 Concentric rings or disks,
48 With vehicle or rider supports,
49 Horizontal axis only.
50 Gyrating axis,
51 Inclined axis,
52 Hobby horses
53 Progressive,
54 Seesaws
55 One person,
56 Rocking support.
56.5 Slides.
57 **Exercising**
58 Chairs and sofas,
59 Field sports,
60 Gymnastic
61 Trapezes and rings,
62 Horizontal bars
63 Parallel bars,

272. AMUSEMENT AND EXERCISING DEVICES—Continued.

Exercising

Gymnastic
64 Vaulting horses,
65 Projectors
66 Spring boards,
67 Hand and wrist
68 Grips,
69 Tread mill,
70 Walking
70.1 Stilts
70.2 Steps.
71 Swimming,
72 Rowing,
73 Bicycle,
74 Skipping
75 Ropes,
76 Striking
77 Striking bags
78 Supports,
79 Push and pull
80 User attached,
81 Weights,
82 Springs
83 Metallic,
84 Dumb-bells and clubs,

86 Catnip balls.

273 AMUSEMENT DEVICES, GAMES.

1 **Miscellaneous.**
1.5 **Basketball.**
2 **Billiards and pool**
3 Tables
4 Convertible billiard and pool,
5 Convertible furniture,
6 Beds
7 Cloth securing devices,
8 Rails
9 Cushions,
10 Table attached ball racks
11 With pocket connected conveying chutes,
12 Pockets,
13 Dust covers,
14 Special game attachments and accessories,
17 Cue chalkers
18 Holders
19 Automatic,
20 Tethered,
21 Fixed,
22 Ball spotting racks,
23 Cue rests
24 Hand attached.
25 **Baseball**
26 Practice devices,
27 Field covers,
28 Ball curvers.
29 **Tennis**
30 Table,
31 Court marking strips.
32 **Golf**
33 Tees,
34 Holes and hole markers,
35 Practice devices
36 Hole simulating devices.

273. AMUSEMENT DEVICES, GAMES—Continued.

37 **Bowling**
38 Mechanically projected ball,
39 Changed or curved ball path,
40 Tethered bowling ball,
41 Special targets,
42 Mechanical pin setters
43 With mechanical pin gatherers,
44 Tethered pin
45 Tethered to bed,
46 Pin spotters,
47 Ball return
48 Automatic,
49 Mechanically operated,
50 Foul indicators,
51 Beds and gutters
52 Pin spots,
53 Back stops,
54 Accessories.
55 **Football.**
56 **Croquet**
57 Tables and boards.
58 **Balls**
59 Billiard and pool,
60 Baseball,
61 Tennis,
62 Golf,
63 Bowling
64 Hand grips,
65 Football and basket ball.
67 **Bats, mallets, racquettes, cues, pins, and billies**
68 Billiard cues
69 Mechanically operated,
70 Tips and tip fasteners
71 Clamps and presses,
72 Baseball,

273. AMUSEMENT DEVICES, GAMES.—Continued.

Bats, mallets, racquettes, cues, pins, and billies
73 Tennis
74 Presses and cases,
75 Handle grips,
76 Table,
77 Golf
78 Resilient striking face,
79 Adjustable head,
80 Shafts and shaft fastenings,
81 Handles and handle grips,
82 Bowling pins,
83 Croquet,
84 Police clubs.
85 **Simulated games**
86 Racing or time determinative contests,
87 Golf,
88 Baseball
89 Mechanically pitched and batted ball,
90 Manually batted ball,
91 Moving surface,
93 With chance element,
94 Football.
95 **Aerial projectile**
96 Combined projector and catcher
97 Tethered projectile,
98 Tethered projectile and target
99 Tethered ring,
100 Peg and ring,
101 Combined target and projector
101.1 Light ray projector,
101.2 Simulated projector.
102 Targets
102.1 Combined with additional indicator
102.2 Electrical,
102.3 Prize dispensing,

273. AMUSEMENT DEVICES GAMES—Continued.

Aerial projectile
Targets
102.4 With projectile stop
103 Projectile return,
104 Pegged,
105 Pocketed.
105.1 Projected picture,
105.2 Moving
105.3 Airplane towed,
105.4 Flying
105.5 Ball,
105.6 Handling and manipulation.
106 Projectiles
106.5 Arrows and darts.
108 **Surface projectile**
109 Moving surface
110 Pivoted,
111 Pivoted gate,
112 Spiral surface,
113 Pocketed
114 Mercury globule,
115 Surface pockets
116 Hazard pockets,
117 Moving pockets,
118 Ball games
119 Combined with projector
120 Gravity projectors,
121 Return course,
122 Ball return,
123 Pocketed
124 Return course,
125 Ball return,
126 Disk or ring games,
127 Targets,
128 Projectiles,
129 Projectors.

273. AMUSEMENT DEVICES, GAMES—Continued.

130 **With game boards**
131 Definitely movable game pieces
132 Shifting arrangements
133 Jumping only,
134 Chance controlled,
135 Chance controlled,
136 Game boards and tables,
137 Game pieces.
138 **Chance devices**
139 Chance selection
140 Fish ponds,
141 Rotating pointer,
142 Rotating disk
143 Edge indication.
144 Lot mixers and dispensers
145 Dice agitators,
146 Dice,
147 Tops.
148 **Game accessories**
149 Card shufflers and dealers,
150 Hand holders
151 Duplicate games,
152 Playing cards.
153 **Puzzles**
154 Balancing ovoids,
155 Folding and relatively movable strips and disks,
156 Take-aparts and put-togethers
157 Geometrical figures, pictures, and maps,
158 Bent wire,
159 Flexible cord or strip,
160 Mortised blocks.
161 **Fortune-telling devices.**

274 SOUND RECORDING AND REPRODUCING.

1 **Miscellaneous.**
2 **Cabinet instruments.**
3 **Duplication.**
4 **Magnetic.**
5 **Radiochemical.**
6 **Fluid column.**
7 **Mechanical**
8 Disk and cylinder,
9 Flat tablet
10 Multiple tablet,
11 Tape,
12 Traveling table,
13 Stylus feed
14 Restoring
15 Automatic,
16 Pivoted amplifier,
17 Cylinder
18 Multiple tablet,
19 Reciprocating mandrel
20 Stylus feed
21 Restoring
22 Automatic.
23 **Tone arms.**
24 **Sound-box mountings.**
25 **Sound boxes**
26 Fixed casing, pivoted stylus,
27 Sound modifier,
28 Convertible,
29 Perpendicularly undulating record type
30 Recorder and reproducer,
31 Interchangeable styluses,
32 Recorder,
33 Friction transmission,
34 Floating weight,
35 Laterally-undulating-record type
36 Interchangeable styluses,
37 Stylus holders,

274. SOUND RECORDING AND REPRODUCING—Continued.

Sound boxes
38 Styluses.
39 **Tablet tables.**
40 **Table mandrels.**
41 **Tablets**
41.4 Magnetic,
41.6 Photographic.
42 Flat
43 Tape,
44 Cylinder.
45 **Stylus changers.**
46 **Recording processes.**
47 **Record-cleaning devices.**

275 SCATTERING-UNLOADERS.

1 **Miscellaneous.**
2 **Traversing machines**
3 Manure-spreader type
4 Load feeding
5 Belt-conveyer type
6 With scatterer,
7 With scatterer
8 Rotary,
9 Discharger operators.
10 **Scattering**
11 Manually operated implements
12 Rotary scatterer,
13 Multiple discharging,
14 Stationary spreader,
15 Rotary scatterer.

276 TYPE SETTING.

1 **Miscellaneous.**
2 **Setting and distributing machines**
3 Registrable magazine and composing channels
4 Magazine and printing member,
5 Circulating feeler and type-holder distributors,
6 Ward distributers,
7 Keyboard distributors.
8 **Setting and justifying machines**
9 Measurer-controlled justifier,
10 Compressing justifier,
11 Indicating justifier.
12 **Setting machines**
13 Pattern control,
14 Hand supply,
15 Registrable magazine and composing channels,
16 Conveyor
17 Endless
18 Power ejector,
19 Power ejector,
20 Converging chutes
21 Power ejector.
22 **Distributing machines**
23 Feeler
24 Circulating type holder
25 Circulating feeler,
26 Ward,
27 Keyboard.
28 **Justifying machines**
29 Measurer controlled
30 Space making
31 Casting,
32 Wedge,
33 Galleys.
34 **Lead handlers.**
35 **Type-line separators.**

276. TYPE SETTING—Continued.

36 **Type arrangers.**
37 **Hand type channels.**
38 **Composing sticks**
39 Positive knee lock.
40 **Galleys**
41 Side and end locking means,
42 Side-locking means,
43 End-locking means.
44 **Type cases**
45 Feeding.

277 MULTIPLE VALVES.

1 **Dependent-motion type**
2 Alternately usable.
3 Multiconduit
4 Rotating,

277. MULTIPLE VALVES—Continued.

Dependent-motion type

5 Reversing
6 Reciprocating,
7 Multiway and serial,
Multiway
8 Stop and nonstop
9 Waste,
Stop
10 Reciprocating and rotating
11 Concentric,
12 Reciprocating
13 Alternately seated
14 Waste
15 Differential,
16 Piston,
17 Gate,
18 Mixing,
19 Rotating,
20 Nonstop
21 Reversely acting,
22 Serial
23 Stop and nonstop
24 Reciprocating and rotating
25 Concentric,
26 Reciprocating
27 Repair check
28 Water-gauge type,
29 Concentric
30 Drainage vent,
Stop
31 Reciprocating and rotating
32 Concentric,
33 Reciprocating
34 Alternately seated,
35 Concentric
36 Equalizing
37 Balanced,
38 Gate,

277. MULTIPLE VALVES—Continued.

Dependent-motion type

Serial
Stop
39 Rotating
40 Irreversible,
41 Concentric,
42 Nonstop
43 Equalizing,
44 Concentric
45 Reversely acting.
46 **Independent-motion type**
47 Air-vent type
48 Nonstop
49 Reversely acting,
50 Multiway and serial
51 Stop and nonstop,
52 Multiway
53 Main and by-pass
54 Stop and nonstop,
55 Stop and nonstop,
Stop
56 Reciprocating and rotating,
57 Reciprocating
58 Gate type,
59 Rotating,
60 Nonstop
61 Reversely acting,
62 Serial
63 Stop and nonstop
64 Reciprocating and rotating,
65 Reciprocating,
Stop
66 Reciprocating and rotating,
67 Reciprocating
68 Reversely acting,
69 Rotating,
70 Nonstop
71 Reversely acting.

278 LAND VEHICLES—ANIMAL DRAFT APPLIANCES.

1 **Miscellaneous.**

2 **Load starters.**

2.1 **Street car.**

Draft equalizers

3 Horses longitudinally aligned
4 Two abreast,
5 Horses abreast
6 Five-horse type
7 With pole or poles,
8 Four-horse type
9 With pole or poles
10 Offset pole
11 Three-against-one pull,
12 Two-against-two pull
13 Lateral evener connection,
14 Three-horse type
15 With pole or poles
16 With intermediate evener
17 Offset,
18 Two-horse type
19 Leverage adjustment
20 Automatic.

21 **Horse detachers**

22 Automatic,
23 Combined brake,
24 Traces from singletree
25 Trace positively moved,
26 Movable trace-eye-engaging element
27 Pivoted,
28 Sliding pin or rod,
29 Thills or poles from vehicle
30 Retracting axle-clip bolts,
31 Doubletree from pole,
32 Singletree from thill or evener.

278. LAND VEHICLES—ANIMAL DRAFT APPLIANCES—Con.

33 **Poles and thills**

34 Plural,
35 Special-purpose attachments,
36 Poles
37 Agricultural-implement type,
38 The pole body,
39 Selective positioned,
40 Slip tongue,
41 Axle attached
42 Width adjustment,
43 Axle hounds attached,
44 Thills
45 Two-wheeled vehicles,
46 Offset draft
47 Selective direct,
48 Sectional,
49 Joints and braces,
50 Tips
51 Safety neck-yoke retainers.

52 **Thill couplings**

53 Resilient,
54 Safety attachments,
55 Plural,
56 Special-position release
57 L-head type,
58 T-head type,
59 D-head type,
60 Removable transverse pin or bolt
61 Antirattling
62 With special pin retainers,
63 Resilient
64 Adjustable,
65 Special pin retainers,
66 Opposed lug engaging or carrying jaws,
67 L-head type,

278. LAND VEHICLES—ANIMAL DRAFT APPLIANCES—Con.

Thill couplings

68 T-head type
69 Cooperating hooks
70 Retainers
71 Spring,
72 D-head type
73 Cooperating hook
74 Retainers
75 Pivoted,
76 Spring,
77 Plural-part eye
78 Pivoted jaws
79 Grapple type,
80 Ball and socket.

81 **Thill-supports**

82 Plural position,
83 Spring latches,
84 Spring,
85 Separate props.

86 **Pole supports**

87 Ground-engaging props,
88 Spring
89 Coil.

90 **Whiffletrees**

91 Resilient,
92 Metallic
93 Trussed,
94 Trussed,
95 Connections
96 Link or clevis
96.1 Resilient,
96.2 Adjustable draft line
96.3 Horizontally,
97 Resilient
98 To pole or thills,
99 To pole or thills
100 Pivot bolt
101 Offset pivot,

278. LAND VEHICLES—ANIMAL DRAFT APPLIANCES—Con.

Whiffletrees

102 Trace and whiffletree connections
103 Resilient,
104 Clamp,
105 Trace-eye-engaging head or end
106 Loop retainers,
107 Hook retainers,
108 Spring-detent retainers,
109 Pivoted button or lug retainers,
110 Rotatable-button retainers,
111 Hooks
112 Trace retaining
113 Movable keeper
114 Snap-hook type,
115 Special-position release
116 Opposed lapping hooks,
117 Whiffletree fastenings.

118 **Trace and thill or pole connections.**

119 **Neck yokes**

120 End construction,
121 Pole couplings
122 Modified pole and yoke (center)
123 Permanently attached,
124 With safety devices,
125 Leather eye or ring.

126 **Holdbacks**

127 Harness attached
128 Breech strap
129 Adjustable,
130 Automatic release.

279 CHUCKS OR SOCKETS.

1 **Miscellaneous.**
2 **Expanding.**
3 **Vacuum.**
4 **With fluid-pressure actuator.**
5 **Angularly adjustable or indexing.**
6 **Eccentric.**
7 **Threaded grip.**
8 **Longitudinal screw clamp.**
9 **Socket type.**
14 Multiple alternative,
16 Self-centering or floating
17 Radially reciprocating jaws,
18 Transverse holder and setscrew,
19 Lost motion
19.1 Swinging external yoke or detent
19.2 Rotary socket,
19.3 Rotary socket,
19.4 Spreading elements,
19.5 Key retainer,
19.6 Sleeve type retainer
19.7 Sleeve in socket.
20 Fluid-conduit drill holding,
Self-grasping
Yielding grasping jaws
22 Ball or roller,
23 Spring jaws,
24 Yielding detent,
One-way-clutch type
28 Wedge,
29 Side detent
30 Ball or roller,
32 Conical clamp threaded in socket,
33 Transversely oscillating jaws
34 Screw actuated,
35 Pivoted jaws
Moving-cam actuator
36 Threaded cam sleeve,

279. CHUCKS OR SOCKETS—Con.

Socket type
Pivoted jaws
Moving-cam actuator,
37 Reciprocating cam sleeve,
38 Fixed cam and moving jaws
39 Axial screw actuator
40 Threaded sleeve actuator,
Split socket
41 Resilient
42 Threaded cam sleeve,
43 Reciprocating cam sleeve,
44 One movable side
45 Sleeved,
46 Spring jaws
Moving cam actuator
47 Threaded sleeve and wedge,
48 Threaded cam sleeve
49 Loose jaws,
50 Reciprocating cam sleeve,
51 Fixed cam and moving jaws
52 Threaded-sleeve actuator,
53 Axial screw actuator,
54 Loose jaws,
55 Loose jaws
Moving-cam actuator
56 Threaded cam sleeve,
57 Reciprocating cam sleeve,
58 Fixed cam and moving jaws
59 Threaded sleeve and body,
60 Obliquely guided reciprocating jaws
61 Threaded sleeve and jaw
62 Conical sleeve,
63 Threaded central cone and jaw,
64 Threaded sleeve and body,
65 Reciprocating jaw advancing sleeve,

279. CHUCKS OR SOCKETS—Con.

Socket type
66 Radially reciprocating jaws
67 Transverse-screw actuated
68 Interlaced jaws,
Moving-cam actuator,
69 Threaded cam sleeve,
70 Threaded sleeve and wedge,
71 Rotary eccentric-cam sleeve
72 Roller and rocking jaw,
73 Worm actuated
74 Reciprocating cam sleeve
75 Ball or roller jaws,
76 Side detent
77 Pivoted or rotary
78 Sleeved,
79 Spring
80 Sleeved,
81 Rotary cam sleeve,
82 Reciprocating sleeve,
83 Set screw,
84 U-clamp,
85 Plural bolt,
86 Single transverse bolt,
87 Longitudinal clamping wedge,
89 Shouldered-tang holding
90 Cap
91 Screw,
93 Tang offset within socket,
94 Tang offset without socket,
95 Bottomless
96 Friction grip,
97 Transverse pin
99 Screw threaded
100 Nut lock
101 Threaded sleeve,
102 Friction grip
103 Drill type,
104 Barbed or pronged tang,
105 Molded or cast-in tang.

279. CHUCKS OR SOCKETS—Con.

106 **Pivoted jaw.**
107 Cam-sleeve actuated,
108 Internal-cone actuated,
109 Toggle actuated.
110 **Radially reciprocating jaws**
111 With indicator,
112 Transverse-screw actuated
113 Annular rack,
114 Spiral cam or scroll actuated
115 Worm,
116 Bevel pinion,
117 Rack-and-pinion actuated,
118 Toggle actuated,
119 Lever actuated
120 Internal cone,
121 Wedge actuated,
122 External-cone actuated,
123 Jaws.

280 LAND VEHICLES.

1 **Miscellaneous.**
1.10 **Simulations (velocipede type)**
1.11 Occupant propelled
1.12 Aircraft,
1.13 Figure
1.14 Noise makers,
1.15 Movable
1.16 Figure and carriage,
1.17 Inchers or steppers,
1.18 Galloping
1.19 Movable rider support
1.20 With added propulsion means,
1.21 Aircraft,
1.22 Figure.
2 **Dropped bodies.**
3 **Wheel propelled.**
4 **Hose and ladder.**
5 **Tank or boiler.**
6 **Body-leveling devices**
7 Tank or boiler.
7.10 **Convertible (velocipede type)**
7.11 To drop frame,
7.12 Wheel to or from runner
7.13 Skates,
7.14 Substituted,
7.15 Occupant propelled
7.16 To or from plural occupant,
7.17 To non-propelled.
8 **Wheeled and runner**
9 Retracting wheel or runner
10 Wheel-runner type,
11 Pivoted lateral axis.
11.10 **Skates**
11.11 With propulsion means,
11.12 Runner type
11.13 Snow skates and skis,

280. LAND VEHICLES—Continued.

Skates

Runner type
11.14 With resiliently mounted foot supports,
11.15 Jointed runner and foot supports,
11.16 Extensible,
11.17 Tubular foot posts,
11.18 Runners,
11.19 Wheeled
11.20 With brake,
11.21 With retrogression preventers,
11.22 Tandem wheels
11.23 Two wheeled,
11.24 One wheel,
11.25 Two wheeled,
11.26 Extensible,
11.27 Trucks and mountings
11.28 Resiliently yieldable,
11.30 Shoe attaching means
11.31 Toe and/or heel clamps
11.32 Screw actuated,
11.33 Lever actuated
11.34 With screw adjustment,
11.35 Ski fasteners,
11.36 Ankle braces,
11.37 Skaters' appliances and attachments
11.38 Scabbards,
11.39 Riding sticks.
12 **Runner**
12.10 With occupant propelled means
12.11 Intermittent ground engaging
12.12 Foot actuated,
12.13 Traction wheel drive
12.14 Foot actuated,
13 Wheel runner,
14 Hub runner,

280. LAND VEHICLES—Continued.

Runner
15 Multiple sled
16 Occupant steered,
17 Swivel and rocking,
18 Toboggan,
19 Drag,
20 Folding,
21 Occupant steered
22 Flexible runner,
23 Push,
24 With draft attachment,
25 Spring,
26 Rocker runner,
27 Knees,
28 Runner bases.
29 **Wheeled**
200 Occupant propelled type
201 Combined with pump,
202 With carrier
203 Side car type,
204 Trailing vehicle,
205 Single axis or wheel
206 Occupant within wheel
207 Epicyclic or squirrel cage type,
208 Dicycles,
209 Parallel connected cycles,
210 With propulsion means
211 Steering by driving,
212 Added or stored energy device
213 Sail attachments,
214 With occupant propulsion means
215 Interposed power storing device
216 Fluid system,
217 Flywheel or weight,
218 Inching or step by step,

280. LAND VEHICLES—Continued.

Wheeled

Occupant propelled type

With propulsion means
219 Intermittent ground engaging drive,
220 Movable occupant support
221 Interconnected with propulsion means
222 Plural occupant propelled,
223 With added power application
224 Hand and foot,
225 Hand,
226 Movable seat
227 And crank hanger,
228 Treadmill type,
229 Eccentrically mounted wheels,
230 Plural power application
231 Plural occupant propelled
232 Hand and foot,
233 Hand and foot
234 Interconnected steering means,
235 Seat or body steered,
236 Reversing and power ratio change
237 Reversing,
238 Shiftable clutch or gearing,
239 Three tandem wheels,
240 Interconnected steering means,
241 Intermittent gripped belt or chain,
242 Hand propelled
243 Strap, drum and ratchet,
244 Oscillating lever
245 Rack and pinion,
246 Linkage and ratchet,

280. LAND VEHICLES—Continued.
Wheeled
Occupant propelled type
With propulsion means
Hand propelled
Oscillating lever
247 Linkage and crank
248 With gearing,
249 Hand wheel or crank and gearing
250 Belt or chain,
251 Strap, drum and ratchet,
252 Reciprocating power application,
253 Oscillating lever
254 Rack and pinion,
255 Linkage and ratchet,
256 Linkage and crank
257 With gearing,
258 Ratchet and gearing,
259 Rotary crank power
260 With gearing
261 Belt or chain,
262 With pitman,
263 With steering
264 Combined with brake,
265 Foot steered,
266 Seat or body steered,
267 Two wheel controlled
268 Centering,
269 Stub axle,
270 One wheel controlled
271 Centering,
272 Checked,
273 Plural occupant,
274 Frames and running gear
275 Yielding
276 Front forks and heads
277 Independent wheel mounting,

280. LAND VEHICLES—Continued.
Wheeled
Occupant propelled type
With steering
One wheel controlled
Frames and running gear
278 Extensible and knockdown,
279 Front forks and heads
280 Crowns,
281 Frames and running gear
282 Polycycles,
283 Yielding
284 Rear forks
285 Independent wheel mounting,
286 Independent wheel mounting,
287 Extensible and knockdown,
288 Rear forks,
289 Attachments and accessories
290 Occupant body harness,
291 Steps and foot rests,
292 Towing attachments,
293 Props and steadying devices
294 Pedal attached,
295 Combined and/or convertible
296 With wheel or propulsion engaging means,
297 With locking means,
298 Pivoted and extensible
299 U-frames,
300 Plural leg,
301 Pivoted
302 U-frames,
303 Plural leg,
304 Extensible or sliding,
30 Convertible
31 Cradle or crib,
32 Skids,
33 Articulated
33.1 Separable motor section,

280. LAND VEHICLES—Continued.
Wheeled
Articulated
33.2 Vehicle train
33.3 Traction-engine tenders,
33.4 Two-wheeled trailers,
33.44 Draft devices
33.5 Trailer steering
33.55 Stub-axle type,
33.6 Adjustable tongue,
33.9 Resilient,
33.10 Shiftable
33.11 Pivoted
33.12 To tractor,
33.13 Pusher type,
33.14 Tow poles and ropes,
33.15 Coupling
33.16 Overload release,
33.17 Ball and socket,
34 Extensible
35 Article support,
36 Folding
37 Traveling case,
38 Pivoted wheel carrier
39 Longitudinal axis
40 Two wheel,
41 Transverse axis,
42 Lateral,
43 Vertically adjustable
44 Positively actuated
46 Tongue,
47 Hand
48 Steering,
49 Trucks and barrows
50 Receptacle
51 Two-wheel,
52 One-wheel,
53 Two-wheel
54 With additional wheel attachment,

280. LAND VEHICLES—Continued.
Wheeled
Hand
Trucks and barrows
Two-wheel
55 Tandem wheels,
56 Warehouse type
57 Movable toe,
58 One-wheel,
59 Three-wheel,
60 Two-wheel,
61 Article supports,
61.5 Repairman's creepers,
62 Three-wheel,
63 Two-wheel
64 Adjusting wheels,
65 Spring
66 Thill and axle connected
67 Interposed spring
68 Body thill mounted,
69 Body axle mounted,
70 Body thill mounted
71 Adjustable,
72 Body axle mounted
73 Adjustable,
74 Adjustable,
75 Thill and body connected
76 Adjustable,
77 Adjustable,
78 One-wheel,
79 Spring,
80 Running gear
81 Multiple truck
81.5 Occupant steered,
82 Tongue truck
83 Vertically adjustable,
84 One-wheel,
85 Swinging axle and rocking,

280. LAND VEHICLES—Continued.
Wheeled
Running gear
86 Swivel truck,
87 Occupant steered
87.01 Coasters
87.02 Occupant pushed type
87.03 Yieldable,
87.04 Standing occupant,
87.05 Extensible or knockdown.
87.1 Foot operated,
88 Combined brake,
89 Checked
90 Fluid,
91 Four-wheel controlled,
92 One-wheel controlled,
93 Stub axle
94 Centering,
95 Link connected
96 Rotary shaft and gearing,
96.1 Mounts
96.2 Springs,
96.3 Pivot in wheel plane,
97 Swinging axle
98 Short turn
99 Four-wheel controlled
100 Oppositely swinging axles
101 Pivoted and sliding reaches,
102 Crossed reaches,
103 Stub axle,
104 Equalized frame,
105 Roller-bearing frame,
106 Body frames
106.5 Spring suspension,
107 With body or load retainers,
108 With tongue antivibrators,
109 Swinging axle and rocking
110 Spring.

280. LAND VEHICLES—Continued.
Wheeled
Running gear
111 Rocking
112 Spring,
113 Swinging axle
114 Platform type
115 Spring,
116 With draft attachment,
117 Offset pivot
118 Spring
119 Longitudinal leaf,
120 Spring
121 Leaf
122 Longitudinal,
123 Cross,
124 Spring,
125 Swinging-axle connections
126 Rocking
127 Platform types
128 Spring,
129 Spring,
130 Platform type
131 Spring,
132 With draft attachment,
133 Offset pivot
134 Spring
135 Longitudinal leaf,
136 Spring
137 Longitudinal leaf,
138 Antirattlers,
139 Hounds,
140 Reaches
141 Swivel,
142 Extensible,
143 Bolsters and standards
144 Varying-width adjustment
145 Pivotally connected,

280. LAND VEHICLES—Continued.
Wheeled
Running gear
Bolsters and standards
146 Vertically adjustable standards.
147 Readily removable standards,
148 Supplemental bolsters,
149 Irons and clips,
150 Attachments
151 Auxiliary load starters,
152 Dust and mud guards
152.1 Velocipede type,
152.2 Combined with wheel guards,
152.3 Flexible or sectional,
153 Body attached
153.5 Joint welts,
154 Securing device,
154.5 Splash guards,
155 Thill or tongue attached,
156 Wheel attached,
157 Axle attached,
158 Wheel scrapers and cleaners
158.1 Velocipede type,
159 Dust guards,
160 Wheel guards
160.1 Velocipede type,
161 Chafe irons
162 Roller,
163 Steps
164 Combined devices,
165 Wheel or axle attached,
166 Shiftable
167 Obstacle operated,
168 Detachable,
169 Treads,
170 Whip sockets
171 Whip gripping
172 Spring,

280. LAND VEHICLES—Continued.
Wheeled
Attachments
Whip sockets
Whip gripping
173 Rubber gaskets,
174 Pivotally connected sections.
175 Brackets and clips,
176 Lock,
177 Combined reinholders,
178 Whip-manipulating devices.
179 Load binders
180 Hay,
181 Rein supports and guards,
182 Rein holders
183 Clamp
184 Spring
185 Pivoted jaws,
186 Hitching and controlling devices
187 Weight,
188 Ground-engaging (brake) lever,
189 Wheel operated
190 Winding drum
191 Shiftable gear,
192 Clutch.

281 BOOKS, STRIPS, AND LEAVES.

1 **Miscellaneous.**
2 **Strips and leaves.**
3 **Books and leaves**
4 Removable cover.
5 **Strips**
6 With platen
7 Strip retained
8 With feed,
9 With attaching means,
10 Leaf retained,
11 With feed,
12 With attaching means
13 Wall,
14 Strip retained.
15 **Books**
16 Multiple
17 Removable cover,
18 Sealed,
19 Removable cover,
20 Protectors,
21 Bindings
22 Scrapbook,
23 Continuous strip,
24 Guard,
25 Metal fastening,
26 Undercut slot,
27 Sewed,
28 Elements,
29 Covers
30 With pencils,
31 With pockets,
32 With pulls,
33 Easel type,

281. BOOKS, STRIPS, AND LEAVES—Continued.

Books
Covers
34 Removable,
35 Flexible,
36 Backs,
37 Sides,
38 Leaves
39 Erasable surface,
40 Flat opening
41 Single leaf,
42 Book-leaf holders and marks,
43 **Leaves**
44 Holders.

282 MANIFOLDING.

1 **Miscellaneous.**
2 **Strips, books, and leaves.**
3 **Strips and leaves**
4 Strip retained
5 With feed,
6 Leaf retained,
7 With feed.
8 **Books and leaves**
9 Multiple copy
10 Multiple books,
11 Multiple books.

282. MANIFOLDING—Continued.

12 **Strips**
13 Strip retained
14 Carbon
15 With feed,
16 With feed,
17 Leaf retained
18 With feed,
19 Carbon
20 With feed,
21 With feed.
22 **Books**
23 Impressed,
24 Multiple.
25 **Envelopes and leaves.**
26 **Leaves**
27 Impressed,
28 Carbon,
29 Holders.

283 PRINTED MATTER.

1 **Miscellaneous.**
2 **Calendar**
3 Indexed,
4 Multiple book.
5 **Ballots.**

283. PRINTED MATTER—Continued.

6 **Concealed data.**
7 **Identification.**
8 **Fraud preventing or detecting**
9 Alteration preventing or detecting
10 Stamps,
11 Cryptographic,
12 Severable part
13 Transportation
14 Transfer.
15 Cash-fare receipts
16 Book.
17 **Cryptographic.**
18 **Labels and tags**
19 Stock indicators,
20 Baggage,
21 Labels
22 Stamps.
23 **Transportation**
24 Mileage,
25 Return,
26 Commutation,
27 Transfer
28 Premium,
29 Premium,
30 Cash-fare receipt
31 Book,
32 Reference,
33 Book.
34 **Maps**
35 Indexed.
36 **Indexed**
37 Plurality of position markers
38 Book,

283. PRINTED MATTER—Continued.

Indexed

39 Blank position markers
40 Book,
41 Index only.
42 Book
43 Multiple.
44 **Mathematics.**
45 **Writing.**
46 **Language.**
47 **Music.**
48 **Tallies**
49 Game
50 Book,
51 Coupon
52 Book.
53 **Theater tickets.**
54 **Insurance.**
55 **Inventories.**
56 **Advertising.**
57 **Banking**
58 Checks,
59 Certificates of deposit.
60 **Sales documents.**
61 **Strips and leaves.**
62 **Strips.**
63 **Books**
64 Covers.
65 **With sliding leaf.**
66 **Accounting and listing forms, books, and sheets.**

284 VALVED PIPE JOINTS OR COUPLINGS.

1 **Multiple coupling**
2 Flexible connecting pipes,
3 Flexible coupling.
4 **Single coupling**
5 Duplicate end
6 Plural conduit, automatic coupling,
7 Transverse port
8 Internal valve
9 Rotary,
10 Reciprocating,
11 Longitudinal port,
12 Automatic engaging,
13 Flexible-tip pipe, internal nipple,
14 Pipe and plate, barrel-bushing type
15 Plural conduit
16 Angled pipe or elbow
17 Pipe and socket,
18 Pipe and socket
19 Flexible packing in socket.

285 PIPE JOINTS OR COUPLINGS.

1 **Miscellaneous.**
2 **Multiple**
3 Combined inlet and outlet,
4 Water-closet type,
5 Spaced plates
6 Secant and sput connection,
6.5 Pipe and plate or box.
7 Flexible
8 Flexible connecting pipes,
9 Swivel,
Ball and socket
10 Concentric tube,
11 Telescopic,
12 Sheet-metal pipe,
13 Inserted threaded section.
14 **Insulated**
15 Ball and socket,
16 Screw thimble,
17 Bolted flange.
18 **Y coupling.**
19 Double.
20 **U coupling.**
21 **Plural conduit**
22 Concentric,
23 Alined bores,
24 Duplicate end, automatic engagement.
24.5 **Pipe and box.**
25 **Pipe and plate**
27 Angled pipe or elbow
29 Center bolt,
30 Secant
31 Roof-flashing type,
32 Tent type,
33 Water-closet type
34 Bolted flange,

285. PIPE JOINTS OR COUPLINGS—Continued.

Pipe and plate

Secant
35 Ball and socket,
35.1 Hole edge clamps
35.2 Transverse screw,
37 Plastic plate,
38 Flexible or yielding plate,
Bushing
39 Wooden-barrel type
40 Plural conduit,
41 Sheel-metal pipe,
44 Hook,
Packed
45 Countersunk
46 Screw gland,
47 External thimble
47.1 Expansible
47.2 Transverse screw.
47.3 Wedge.
48 Screw,
49 Sput
50 Screw clamped
51 Lugged
52 Movable lug,
53 Thimble
54 Internal,
55 Screw,
56 Expanded or swaged pipe.
57 **Duplicate end**
58 Automatic engagement,
59 Intermediate sleeve,
60 Side slide,
61 Screw thimble,
Transverse port
62 Integral hook
63 Gaskets and retainers,
64 Diagonal port,

285. PIPE JOINTS OR COUPLINGS— Continued.

Duplicate end
Longitudinal port
65 Pivoted hook or loop,
66 Rotary sleeve,
Integral hook
67 Rotary engagement,
68 Oscillating engagement
69 Gaskets and retainers.
70 **Automatic engagement.**
71 **Flexible or yielding pipe**
72 Concentric pipes,
73 Angled pipes,
74 Molded joint,
75 Intermediate coupling,
76 Internal sleeve
77 External clamp or holder
78 Bolted external ring or flange,
79 Screw thimble,
80 Internal nipple
81 Flexible-tip pipe
82 External clamp,
83 With opposed coupling,
84 External clamp or holder,
85 Bolted external ring,
86 Screw thimble,
87 Screw thimble
88 Coacting thimbles,
89 Wooden.
90 **Flexible-material joint.**
91 **Ball and socket**
92 Multiplex,
93 Hinged,
94 Bolted flange,
95 Screw thimble.
96.1 **Swivel**
96.3 Lateral port to annular sleeve type,
96.5 Cylinder in socket type,

285. PIPE JOINTS OR COUPLINGS— Continued.

Swivel
96.6 With plug or access closure
96.7 With hollow central bolt,
96.8 With yoke,
96.9 With center bolt,
97.1 Pipe in socket type
97.3 With ball, ring, or pin detent,
97.5 With flange in socket
97.6 With spring-pressed flange,
97.7 With flange locked axially
97.8 Packed
97.9 Fluid actuated packing.
98 **Coupling casing**
99 Longitudinally divided
100 Lateral port,
101 Lateral port.
102 **Transverse port**
103 Pipe and socket, flanged pipe.
105 **Angled pipe or elbow**
106 Molded joint,
107 Pipe and socket,
108 External clamp.
109 **Liquid seal.**
110 **Detachable hinge.**
111 **Molded joint**
112 Composite pipe,
113 Internal and external sleeve,
114 External sleeve,
115 Pipe and socket
116 Inserted section,
117 Interlocked joint,
118 Perforated socket,
119 Leak-preventing gland.
120 **Screw thimble**
121 Diagonal joint,
122 Pipe and socket
123 Clamping thimble,
124 Pipe flange in socket,

285. PIPE JOINTS OR COUPLINGS— Continued.

Screw thimble
125 Segmental threads,
126 Coacting thimbles
127 Flanged pipes,
128 Divided thimble.
Flanged pipes
129 Clamp.
130 **Bolted flange**
131 Intermediate sleeve,
132 External sleeve,
133 Pipe and socket
134 Packed
135 Bolted flange follower
136 Flanged pipe,
137 Attached flange
138 Detachable flange ring,
139 Integral flange
140 Detachable flange ring,
141 Internal sleeve,
142 Rings or sleeves.
143 **Side slide**
144 Clamping lever.
145 **Screw**
146 Longitudinal port
147 Divided socket,
148 Lined pipe,
149 Segmental threads
150 Radially moved,
151 Partly threadless,
External packing
152 Detachable compressor,
153 Attached compressor,
154 Countersunk
155 Compressor,
156 Intermediate packing,
157 Internal packing,
158 Sheet-metal pipe,
159 Molded joint,

285. PIPE JOINTS OR COUPLINGS— Continued.

Screw
160 Reducer.
161 **Pipe and socket**
162 Piston,
163 Flexible packing in socket
164 External clamp,
165 Expanded packing,
166 Screw gland
167 Flanged pipe,
Detent
168 Reciprocating
169 Spring,
170 Pivoted
171 Tighteners,
172 Side-lug engaging,
173 Spring,
174 Leaf spring,
Rotary engagement
175 Lugged pipe
176 Internal reciprocating packer,
177 Rotary locking sleeve,
178 Reciprocating locking sleeve,
179 Sheet-metal pipe,
180 Rotary locking sleeve,
181 Tightener,
182 Wedge
182.1 Ring,
183 Reducer,
184 T-socket,
185 Sheet-metal pipe
186 Clamped socket.
187 **Pivoted detent**
188 Tightener,
189 Rotary-sleeve actuated.
Leaf-spring detent
190 Inward movement.
191 **Rotary locking sleeve.**
192 **External and internal sleeve.**

285. PIPE JOINTS OR COUPLINGS—Continued.

193 **External sleeve**
194 Longitudinally divided
195 Lateral port,
196 End packing.
197 **Internal sleeve.**
198 **Adapters.**
199 **Adjustable length.**
200 **Plugged.**
201 **Sheet metal**
201.5 Longitudinally divided.
202 **Plural wall.**
205 **Fittings**
206 Covered or lined,
207 With removable wear element,
208 Independent or plural passage,
209 With support,
210 For plural pipes.
211 Elbows
212 Adjustable angle,
213 With access opening.

286 PACKED SHAFT OR ROD JOINTS.

1 **Miscellaneous.**
5 **Journal-box type**
6 Channeled box.
7 **Rotary rod**
8 Fluid port
9 Fluid seal,
10 Fluid seal,
11 Flexible-diaphragm type.
12 **Cylinder head**
13 Tandem cylinders,
14 Interior of cylinder.
Rod and plate
15 Ball and-socket secant.

286. PACKED SHAFT OR ROD JOINTS—Continued.

16 **Cable.**
17 **External receptacle.**
18 **External packing.**
19 **Fluid circuit.**
20 **Sectional**
21 Fluid port,
22 Longitudinally and radially spring pressed,
23 Longitudinally spring pressed,
24 Radially spring pressed,
Socket
25 Bolted flange follower,
26 **Fluid seal.**
27 **Fluid port**
28 Longitudinally spring pressed.
29 **Flexible-diaphragm type.**
30 **Longitudinally spring pressed.**
Socket
31 Follower
32 External spring or weight,
33 Bolted flange,
34 Screw thimble,
35 Screw.
36 **Valved or shouldered rod.**
37 **Screw thimble.**
38 **Fluent packing with compressor.**
39 **Bolted flange.**

287 ROD JOINTS OR COUPLINGS.

1 **Miscellaneous.**
2 **Inserted section.**
9 **Straightedge type.**
Adjustable angle
12 Ball and socket,
14 Hinged.
20 **Rod to base, plate or head**
20.5 Bent or headed rod,
21 Ball and socket,
23 Attached socket,
25 Platelike body.
Crossed rods or wires
49 Separate connections
50 Wire.
51 **Crossed bars.**
52 **Collar, pulley, or lever and shaft**
52.01 Roll,
52.02 Arm,
52.03 Split pulley
52.04 Bushing,
52.05 Grooved pulley and grooved shaft,
52.06 Clamping ring,
52.07 Side clamp,
52.08 Set screw pin or bolt,
52.09 Binding cam or wedge.
53 Shaft end attached.
54 **Rigid angle joints**
54.1 With slidable joint,
55 Square type,
56 Socket.
57 Scythe nib type.
58 **Adjustable length**
59 Screw and yoke,
Turnbuckle
60 Right-and-left screw,
61 Screw and swivel,
62 Screw.

287. ROD JOINTS OR COUPLINGS—Continued.

63 **Ribbon, band, or flat rod**
64 Interlocked or lapped
65 Sleeved.
75 **Flexible rod or strand**
76 Intermediately coupled fasteners,
77 Interlocked or lapped
78 Sleeved
79 Transverse pins,
80 Offset or knotted end and sleeve,
Socket
82 With hook, bail or eye,
83 Binding grapple with hook, bail or eye.
85 **Flexible-material joint**
86 Spring.
87 **Ball and socket**
88 Secant,
89 Forked socket,
90 Right angled.
91 **Swiveled.**
92 **Hinged**
93 Right angled
94 Self-adjusting journal,
95 Hooked,
96 Transverse pin,
97 T-head,
98 Sleeve,
99 Lock,
100 Forked,
101 Lapped.
103 **Interlocked or lapped**
104 Sleeve
105 Screw.
107 **Flanged rod and flanged coupling nut.**
108 **Sleeve**
109 Indenting,
110 Flexed,

287. ROD JOINTS OR COUPLINGS—Continued.

Sleeve
111 Divided,
112 Bolted flange,
113 Upset rod,
114 Wedged,
115 Binding detent,
116 Flanged coupling nut,
117 Screw,
118 Clamp.
119 **Socket**
124 Expanded rod end,
125 Screw,
126 Friction grip.
127 **Doweled.**
128 **Screw-connected wooden rods.**
129 **Bolted flanges.**
130 **Flanged.**

288 JOINT PACKINGS.

1 **Miscellaneous.**
2 **Rod or shaft type**
3 With confining housing,
4 Fluid pressure responsive
5 Of channel section,
6 Inflatable,
7 With wedge elements,
8 With comminuted material,
9 With metallic wearing surface
10 Metallic sheath,
11 With wire,
12 With metallic foil,
13 Segmental,
14 Metal only
15 Foil or strand,
16 Non-metal only
17 With woven or braided fabric
18 Rubber impregnated,
19 Rubber only.
20 **Opposed fixed flange type**
21 Interconnected spaced packings,
22 With retainer,
23 Ribbed contact surface,
24 Fluid pressure responsive,
25 Metal faced
26 Edge confined,
27 Internal metallic reinforcement
28 Sheet reinforcement
29 Tanged or foraminous,
30 Metal only
31 Of sheet material
32 Edge confined,
33 Non-metal only
34 Sheet or flat strip.
35 **Jointing structure.**

289 TYING CORDS OR STRANDS.

1 **Miscellaneous.**
2 **Knotters**
3 Weaver's knot,
4 Square knot,
5 Rotary lateral bill
6 Swinging knotter frame,
7 Sliding jaw,
8 Pivoted inner jaw
9 Angular drive
10 Notched-disk cord holder,
11 Bills,
12 Sleeve and spindle,
13 Cord holders
14 Notched disk,
15 Cord guides,
16 Needles.
17 **Hand implements.**

290 PRIME-MOVER DYNAMO PLANTS.

1 **Miscellaneous.**
2 **Heating plants.**
3 **Train.**
4 **Plural prime mover.**
5 **Alternating current, rotary field and armature.**
6 **Multiple-armature dynamo.**
7 **Electric control**
8 Excitation dynamo,
Traction
9 Electric traction motor
10 With starting and generating dynamo
11 With generator,
12 Rotary field and armature,
13 Ignition,
14 With generator
15 Rotary field and armature,
16 Battery,
17 Engine control,
18 As starter
19 As generator
20 Rotary field and armature,
21 Engine control,
22 Starting and generating dynamo
23 Rotary field and armature
24 Engine control,
25 Engine control
26 Ignition,
27 Electric starting motor with generator,
28 Electric starting motor,
29 Rotary field and armature
30 Demand starters,
31 Starting and generating dynamo
32 With generator
33 Ignition,

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290. PRIME-MOVER DYNAMO PLANTS—Continued.

Electric control
Starting and generating dynamo
34 Engine control
35 Ignition,
36 Electric starting motor with generator
37 Ignition,
38 Electric starting motor,
39 Rotary field and armature,
40 Engine control
41 Ignition,
42 Tide and wave motors,
43 Fluid-current motors
44 Wind.
45 **Traction.**
46 **Starting and generating dynamo.**
47 **Electric starting motor with generator.**
48 **Electric starting motor.**
49 **Rotary field and armature.**
50 **Battery.**
51 **Engine control.**
52 **Turbogenerators.**
53 **Tide and wave motors.**
54 **Fluid-current motors**
55 Wind.

291 TRACK SANDERS.

1 **Miscellaneous.**
2 **Wheel-slip control.**
3 **Fluid delivery**
4 Smoke and cinder,
5 Reversing
6 Movable trap valve,
7 Gravity conversion
8 By-pass,
9 Horizontal trap axis,
10 Vertical trap axis,
11 Sand traps,
12 Blast-nozzle cleaners,
13 Air ports and screens.
14 **Brake-handle control.**
15 **Brake-system control.**
16 **Hand-valve control.**
17 **Alarms.**
18 **Jet in hopper.**
19 **Heaters**
20 Electric,
21 Steam.
22 **Power actuated**
23 Electric,
24 Fluid.
25 **Sand feeders**
26 Reversing,
27 Chain,
28 Oscillatory
29 Cup,
30 Hopper,
31 Spout cut-off,
32 Rotary,
33 Screw,
34 Longitudinal slide,
35 Pivoted slide,
36 Vertical plunger
37 Helical guide.

291. TRACK SANDERS—Continued.

38 **Sand hoppers**
39 Wheel guard,
40 Dome.
41 **Sand-delivery pipe**
42 Cleaners
43 Fluid,
44 Flexible,
45 Telescopic,,
46 Nozzles
47 Pivoted.
48 **Sand screens.**

292 CLOSURE FASTENERS.

1 **Miscellaneous.**
2 **Bolts**
3 Multiple
4 Sliding and rotary,
5 Sliding and swinging
6 Combined motion
7 Lever-operating means,
8 Sliding and hooked end,
9 Sliding and roller,
10 Sliding and spring arm,
11 Swinging and hooked end,
12 Swinging and roller,
13 Swinging and spring arm,
14 Double acting
15 Roller,
16 Sliding,
17 Spring arm,
18 Swinging,
19 Spring arm
20 Combined motion,
21 Emergency operating means,
22 Gear,
23 Roller,
24 Hooked end
25 Operating means
26 Link and lever,
27 Cam,
28 Flexible,
29 Lever,
30 Push or pull rod,
31 Rigid,
32 Sliding
33 Operating means
34 Cam and lever,
35 Lever and push or pull rod,
36 Link and lever,
37 Cam,
38 Flexible,

292. CLOSURE FASTENERS—Contd.

Bolts
Multiple
Sliding
Operating means
39 Gear,
40 Lever,
41 Push or pull rod,
42 Rigid,
43 Screw,
44 Swinging
45 Operating means
46 Cam and lever,
47 Link and cam,
48 Link and lever
49 Cam,
50 Flexible,
51 Gear,
52 Lever,
53 Push or pull rod,
54 Rigid,
55 Screw,
56 Swinging and hooked end, multiple head,
57 Sliding and rotary
58 Combined motion,
59 Multiple head,
60 Spring projected
61 Combined motion,
62 Spring retracted,
63 Sliding and swinging
64 Operating means
65 Cam,
66 Lever,
67 Rigid,
68 Multiple head,
69 Spring retracted,
70 Double acting
71 Sliding and swinging,
72 Gear,

292. CLOSURE FASTENERS—Contd.

Bolts
Double acting
73 Roller,
74 Sliding
75 Roller,
76 Spring arm
77 Roller,
78 Swinging
79 Roller,
80 Spring arm
81 Operating means
82 Link and lever,
83 Cam,
84 Flexible,
85 Lever,
86 Push or pull rod,
87 Rigid
88 Seal catch,
89 Swinging catch,
90 Screw,
91 Multiple head,
92 Emergency operating means
93 Panel,
94 Platform,
95 Hooked end
96 Operating means
97 Link and lever,
98 Cam,
99 Closure,
100 Lever,
101 Rigid
102 Closure catch,
103 Friction catch,
104 Padlock or seal catch,
105 Screw catch,
106 Sliding catch,
107 Spring-arm catch,
108 Swinging catch,

292. CLOSURE FASTENERS—Contd.

Bolts
Hooked end
109 Sliding and swinging
110 Operating means
111 Cam,
112 Gear,
113 Lever,
114 Rigid,
115 Screw,
116 Multiple head
117 Operating means
118 Lever,
119 Push or pull rod,
120 Rigid,
121 Spring projected
122 Operating means
123 Link and lever,
124 Cam,
125 Flexible,
126 Lever,
127 Push or pull rod,
128 Rigid,
129 Spring retracted,
130 Gravity actuated
131 Operating means
132 Cam,
133 Flexible,
134 Lever,
135 Push or pull rod,
136 Rigid,
137 Sliding
138 Operating means
139 Link and lever,
140 Cam,
141 Flexible,
142 Gear,
143 Lever
144 Motor,

292. CLOSURE FASTENERS—Contd.

Bolts
Sliding
Operating means
145 Rigid
146 Closure catch,
147 Friction catch,
148 Padlock or seal catch,
149 Screw catch,
150 Sliding catch
151 Seal,
152 Spring-arm catch,
153 Swinging catch
154 Seal,
155 Screw,
156 Multiple head
157 Operating means
158 Link and lever,
159 Cam,
160 Gear,
161 Lever,
162 Rigid,
163 Spring projected
164 Operating means
165 Cam and lever,
166 Lever and push or pull rod,
167 Link and lever,
168 Link and push or pull rod,
169 Cam,
170 Sliding cam,
171 Flexible,
172 Gear,
173 Lever,
174 Push or pull rod,
175 Rigid,
176 Screw,
177 Spring retracted
178 Friction catch,
179 Sliding catch,
180 Spring-arm catch,

292. CLOSURE FASTENERS—Con.

Bolts
Sliding
Spring retracted
181 Swinging catch,
182 Cam-operating means,
183 Gravity actuated
184 Operating means
185 Cam and lever,
186 Link and lever,
187 Cam,
188 Lever,
189 Rigid,
190 Curved,
191 End lever,
192 Pivoted end,
193 Roller,
194 Swinging
195 Operating means
196 Link and lever,
197 Cam,
198 Closure,
199 Gear,
200 Lever,
201 Motor,
202 Rigid
203 Closure catch,
204 Friction catch,
205 Padlock or seal catch,
206 Screw catch,
207 Sliding catch
208 Seal,
209 Spring-arm catch,
210 Swinging catch
211 Seal,
212 Screw,
213 Multiple head
214 Operating means
215 Cam,
216 Closure,

292. CLOSURE FASTENERS—Con.

Bolts
Swinging
Multiple head
Operating means
217 Lever,
218 Rigid,
219 Spring projectea
220 Operating means
221 Lever and push or pull rod,
222 Link and cam,
223 Link and lever,
224 Cam,
225 Flexible,
226 Lever,
227 Push or pull rod,
228 Rigid,
229 Spring retracted,
230 Gravity actuated
231 Operating means
232 Cam and lever,
233 Link and lever,
234 Cam,
235 Flexible,
236 Lever,
237 Push or pull rod,
238 Rigid,
239 Roller,
240 Swinging and camming
241 Rigid operating means,
Spring projected
242 Rigid operating means,
243 Seal-rupturing devices,
244 Reversible
245 Cam and lever operating means,
246 Loop
247 Sliding and swinging, lever-operating means,
248 Sliding catch,
249 Spring-arm catch,

292. CLOSURE FASTENERS—Con.

Bolts
Loop
250 Swinging catch,
251 Screw.
252 **Ball.**
253 **Bendable securers.**
Bolt releasers
254 Free-end-engaging means,
255 Foot operated,
256 **Clamps**
256.5 Hatch fastener,
257 Cam-operating means,
258 Portable.
259 **Cross bars**
260 Screw-operating means.
261 **Cylinder.**
262 **Extension link**
263 Multiple,
264 Chain,
265 Notched bar
266 Sliding catch,
267 Swinging catch,
268 Slotted bar
269 Sliding catch,
270 Swinging catch,
271 Notched keeper,
272 Slotted keeper,
Slotted or notched keeper
273 Sliding catch,
274 Swinging catch,
275 Friction catch,
276 Screw catch,
277 Sliding catch,
278 Swinging catch.
Gear
279 Sliding catch,
280 Swinging catch.
281 **Hasps**
282 Seal catch,

292. CLOSURE FASTENERS—Con.

Hasps
283 Sliding catch
284 Seal,
285 Swinging catch
286 Seal,
287 Seal-rupturing devices.
288 **Portable.**
289 **Portable securer plate or bar**
290 Sliding and swinging holding member,
291 Screw-holding member
292 Sliding holding member
293 Screw-operating means,
294 Screw catch,
295 Sliding catch,
296 Swinging catch,
297 Swinging holding member
298 Catch devices.
299 **Rings.**
300 **Rigid engaging means**
301 Screw catch,
302 Sliding catch,
303 Spring-arm catch,
304 Swinging catch.
305 **Rod clamps**
306 Friction-plate catch.
307 **Seals**
308 Compressible disk
309 Reinforced,
310 Sheet metal,
311 Multiple
312 Sheet metal,
313 Hard and soft metal.
314 Compressible rivets and eyelets,
315 Distorted shackle,
316 Driving,
317 Interengaging shackle ends, inclosing housing.

292. CLOSURE FASTENERS—Continued

Seals
Rigid shackle ends
318 Resilient engaging means
319 Resilient and rigid engaging means
Resilient shackle ends
320 Rigid engaging means
321 Resilient engaging means
322 Single piece, spring catch
323 Shiftable catch, shackle operated
324 Split-ring catch, shackle operated
325 Strap-end fasteners
326 Rigid disk, distorted shackle
327 **Seal bolts**
Shackles
328 Seal catch
329 Sliding catch, seal
330 Swinging catch, seal
331 Seal-rupturing devices
332 **Trippers**
333 Sliding detent
334 Spring-arm detent
335 Sliding bolt, swinging detent
336 Swinging bolt, swinging detent
336.5 **Rollback and spindle connection**
337 **Bolt casings**
338 **Braces**
339 Portable
340 **Keepers**
341 Segment
342 **Wedges**
343 Portable
344 **Weights**
345 **Blind-slat holders**
346 **Bolt guards**
347 **Knobs**
348 **Knob-attaching devices**
349 Friction
350 Screw
351 Guards
Knob-attaching devices
352 Sliding
353 Spring arm
354 Swinging
355 Wedge
356 **Knob bearings**
357 **Knob rose plates**
358 **Latch spindles**
359 **Latch-spindle catches**

293. VEHICLE FENDERS

1 **Miscellaneous**
2 **With car control**
3 Cable grip
4 Electric circuit
5 Air brake
6 Track brake
7 Chock block
8 Wheel shoe
9 **Motor actuated**
10 Electric
11 **Car-axle actuated**
12 **Dirigible**
13 Automatic
14 **Car and truck equalizer**
15 **Body traps**
16 Lateral closure
17 **Rotary**
18 Diverging rolls
19 Horizontal wheel
20 Endless belts
21 **Side projector**
22 Twin sections
23 Single tilter
24 **Forward projector**
25 Spring actuated
26 Plunger type
27 **Lazy tongs**
28 **Rear-slide storage**
29 Folding upright
30 **Double-ender interconnected**
31 **Dash and wheel**
32 Front-lift back drop
33 Trip gate
34 **Drop fender**
35 Trip gate
36 Contact on fender
37 Buffer trip
38 **Front barrier**
39 Tilting receiver
Front barrier
40 Net-tension operated
41 **Releasable upright apron**
42 **Scoop type**
43 Wheeled
44 Hinged
45 Folding
46 Net roller
47 Swing-link
48 **Pilot type**
49 Roller front
50 **Foldable side wings**
51 **Frame-and-web form**
52 Automobile
53 Rake tooth
54 **Buffer type**
55 Bar
56 Metallic spring
57 **Side fender**
58 **Wheel tread**

294. HANDLING—HAND AND HOIST-LINE IMPLEMENTS

1 **Miscellaneous**
2 **Miscellaneous compound implement**
3 Plier or tong type
4 **Barrel-roller type**
5 **Ear-corn holders**
5.5 **Rod type supports and hangers**
6 **Plate turners**
7 **Pancake-turner type**
8 Special turning element
8.5 **Clothes tongs**
9 **Stove implements**
10 Combined
11 Fire tong
12 Lid lifter
13 Pivoted jaw
14 Poker
15 **Hand bars and hand barrows**
16 Opposing jaws
17 Cant-hook type
18 Railway coupling tools
19 **Poles**
20 Globe manipulators
21 Rotatable graspers
22 Store goods
23 Compound tool
23.5 Laundry sticks
24 Compound tool
25 **Hand and finger attachments**
26 **Hand-hook type**
26.5 **Discharging hand receptacles, trays or cages**
27 **Plate and receptacle lifters**
28 Pivoted graspers
29 Rim and bottom engaging
30 Axially extending handle
31 Rim-gripping jaws

Plate and receptacle lifters
32 Bottom engaging
33 Resilient
34 Sliding graspers
49 **Hand forks and shovels**
50 Fork-tine or shovel clearers
50.5 With grappling type forks or shovels
50.6 Grappling type
50.7 Annularly arranged
50.8 With movable cooperating load engaging member
50.9 Fixed and movable members
51 Convertible and combined
52 Fork and rake
53.5 Pivoted and adjustable head
54 Snow-shovel type
55 Scoop
56 Edge guards
57 Handles
58 Auxiliary
59 Attachments
60 Foot pieces
61 **Spears**
62 **Brick carriers**
63 Hoist-line frames
64 **Vacuum**
65 Frames
65.5 **Magnet**
66 **Submarine hooks and grapples**
67 **Frames and cages**
68 **Hoisting-bucket type**
69 Bottom or side discharge
70 Twin bucket sectors

Hoisting-bucket type
Bottom or side discharge
71 Twin doors
72 Vertically sliding closure
73 Tilting discharge
74 **Hoist-line slings**
75 Latch release
76 Bottom
77 Net
78 **Cable-and-hook tackle**
79 **Gambrels**
80 Grappling
81 **Spacing hoist bar**
82 **Hoist-line or grab hooks**
83 Releasing
84 Boat
85 **Overhead-beam hooks and grapples**
86 **Grapples**
87 Multiple object
88 Magnet or piston controlled
89 Lewices
90 Collar engaging
91 Rigid yoke
92 Rigid gripper
93 Expanding
94 Cam-spread jaws
95 Pivoted
96 Slip wedge
97 Pivoted
98 Hay-fork type
99 Resilient
100 Separate sliding operator
101 Pivoted cam and hook
102 Socket and slip wedge

Grapples
103 Fixed and movable jaw
104 Pivoted jaw
105 Hay-fork type
106 Pivoted jaws
107 Hay-fork type
108 With auxiliary retainer
109 Latched
110 Automatic
111 Separate-cable operator
112 Suspension
113 Surrounding frame
114 Opposing load-engaging cams
115 Separate sliding operator
116 Cam operated
117 Auxiliary operating handle
118 Crossed levers
119 Tandem tongs
120 **Hay-fork type**
121 Corkscrew
122 Single tilting fork
123 With auxiliary retainer
124 Latch release
125 Combined harpoon and fork
126 Harpoon
127 Mechanically spread barbs
128 Multiple
129 Latch release
130 Latch release
131 **Shield devices**

295 RAILWAY WHEELS AND AXLES.

1 Wheels
2 With crank pin,
3 Epicyclic,
4 Rack rail,
5 Attached gear,
6 Counterbalance,
7 Sound deadeners,
8 Composite cast,
8.5 Convertible road and rail,
9 Movable flange,
10 Loose tires,
11 Tire cushions
12 Pneumatic,
13 Wooden blocks,
14 Metallic springs,
15 Tire fasteners
16 By welding,
17 By casting,
18 Integral lugs,
19 Transverse keys,
20 Bolted lap flanges,
21 Webs
22 Sheet metal
23 With filler,
24 With integral tire,
25 Spokes
26 Cast in,
27 Integral cast
28 Hollow webs,
29 Wrought
30 Composition,
31 Wheel tread
32 Multiple rollers,
33 Multiple,
34 Form,
35 Bushings,

295. RAILWAY WHEELS AND AXLES—Continued.

36 Axles
37 Sleeved and fixed wheels,
38 Twin middle bearing,
39 Couplings
40 Bolted flange,
41 Mine car
42 Axle brackets.
43 Wheel-attaching devices
44 Loose wheel
45 Exterior hub groove
46 Imposed roller,
47 Axle groove
48 Lock bolt,
49 Axle end stop
50 Linchpin.

296 LAND VEHICLES, BODIES AND TOPS.

1 Bodies
2 Cutter,
3 Racks
4 Barrel,
5 Tobacco,
6 Hay
7 Extensible,
8 Metallic,
9 Irons,
10 Convertible box
11 Hay and box
12 Stock
13 Pivoted top boards,
14 Pivoted side boards,
15 Grain tanks,
16 Hearses
17 Combined carriages,
18 Coffin-retaining devices,
19 Ambulances
20 Wheeled stretchers,
21 Advertising and displaying,
22 Lunch wagons,
23 Camping,
24 Inclosed compartments,
25 Dropped bottom,
26 Extensible,
27 Collapsible,
28 Frame structure
29 Corners and joints
30 Metallic reenforcements,
31 Materials,
32 Top boards
33 Baffle,
34 Spacing devices,
35 Body-securing devices,
36 Top and side board securing de-

296. LAND VEHICLES, BODIES AND TOPS—Continued.

Bodies
37 Auxiliary package compartments.
38 Drip pans,
39 Linings,
40 Ties,
41 Wear strips,
42 Stay irons,
43 Stakes and sockets,
44 Doors and windows
44.5 Window guides,
45 Shiftable side panels,
46 Laterally movable link hinged,
47 Horizontally sliding,
48 Telescoping sections,
49 Pivotally connected sections,
50 End gates
51 Combined types,
52 Vertically removable,
53 Rearwardly removable
54 Telescoping sections,
55 Pivotally connected sections,
56 Upwardly swinging,
57 Downwardly swinging
58 Shovel-board type
59 Readily removable
60 Box-engaging frames or clips,
61 Combined loading chute,
62 Combined steps,
63 Seats with body modifications
64 Seating arrangements,
65 Shifting seats
66 Seat-forming body parts,
67 Attached side panels,
68 Door or end-gate operated,
69 Seats convertible to other devices,

296. LAND VEHICLES, BODIES AND TOPS—Continued.

Bodies

70 Dashboards
71 Rails and handles,
72 Securing devices
73 Pivoted,
74 Extensions,
75 Foot rests,
76 Boots,
77 Lap-robe holders and locks,
78 Storm-front shields, aprons, and robes
78.1 Velocipede type,
79 Top-supported windowed panels
80 Combined aprons,
81 Robes,
82 Aprons,
83 Curtains,
84 Windshields
85 Rear seat,
86 Connected horizontally pivoted panels
87 Edge to edge,
88 Link hinged,
89 Vertically movable panels,
90 Single panel,
91 Deflected protecting air-currents,
92 Hinges,
93 Weather strips,
94 Ventilators,
95 Auxiliary protectors
96 Pivoted panels,
97 Glare screens.

Tops

98 Roll-up covers,
99 Extensions,
100 Load covers
101 Refuse,

296. LAND VEHICLES, BODIES AND TOPS—Continued.

Tops

102 Standing
103 Detachable limousine type,
104 Spaced parallel bows
105 Collapsible,
106 End gate,
107 Let-down type
108 Pivotally connected sections,
109 Collapsible spaced parallel bows,
110 Plural up position,
111 Single bow group
112 Raising and lowering devices
113 Spring,
114 Two bow groups
115 Raising and lowering devices,
116 Outrigger type
117 Raising and lowering devices,
118 Bows and slats
119 Irons,
120 Braces,
121 Joints and couplings
122 Brace and bow pivots,
123 Shifting rails,
124 Down supports
125 Prop-block cushions
126 Spring,
127 Bow spacers,
128 Clamping
129 With bow spacers,
130 Strap,
131 Top attached,
132 Body and top attached
133 Spring,
134 Spring,
135 Valance,
136 Dust covers,
137 Roof or cover structure,

296. LAND VEHICLES, BODIES AND TOPS—Continued.

Tops

138 Curtains
139 Door opened,
140 Overhead storage
141 Rolled or folded,
142 Vertical roller,
143 Horizontal roller,
144 Backstays,
145 Windowed.

297 THERMOSTATS AND HUMIDOSTATS.

Humidostats

1 Absorption,
2 Wet and dry bulb.

Thermostats

3 Expanding fluid
4 Multiple element,
5 Vapor-pressure generator,
6 Float or piston operation,
7 Balanced,
8 Bellows type,
9 Wafer type,
10 Bourdon type,
11 Expanding solid
12 Multiple element,
13 Conduit,
14 Concentric elements.
15 Compound bar
16 Coil.

298 LAND VEHICLES, DUMPING.

1 **Miscellaneous.**
2 **Hand trucks and barrows**
3 Single wheel.
4 **Sleds.**
5 **Two-wheel**
6 With cover or end-gate control.
7 **With load-delivering chute.**
8 **Plural load units.**
9 **Rotating and tilting.**
10 **Rotating.**
11 **Elevating and tilting.**
12 **Sliding and tilting**
13 Side delivery only,
14 Operating mechanism
15 Vehicle-motion controlled,
16 Vehicle-motor controlled.
17 **Tilting**
18 Side delivery only,
19 Operating mechanism
20 Vehicle-motion controlled,
21 Vehicle-motor controlled
22 Fluid-pressure operators,
23 With cover or end-gate control.
24 **Hopper type**
25 Pivoted sections,
26 Tilting bottom,
27 Bottom opening
28 Removable bottom boards,
29 Hinged doors
30 Transversely hinged only,
31 Longitudinally hinged only
32 Parallel swinging,
33 Oppositely swinging
34 Inwardly only,
35 Outwardly only
36 Vertically movable,
37 Closing equalizers.
38 **Catches.**

299 FLUID SPRINKLING, SPRAYING, AND DIFFUSING.

1 **Miscellaneous.**
2 **Fountains**
3 Ornamental
4 Illuminated,
5 Reversible,
6 Fluid-pressure feed,
7 Pump or piston feed,
8 Drinking
9 Combined faucet and fountain
10 Single outlet,
11 Swinging attachment,
12 Catch basin and waste outlet
13 Valved,
14 Liftable bubble nozzle,
15 Nozzles or bubble cups
16 Valved,
17 Portable drinking tubes.
18 **Pattern sprayers or sprinklers**
19 Roses and pipes.
20 **Slow diffusers**
22 Drip,
23 Barometric feed,
24 Holders.
25 **Intermittent discharge.**
26 **Continuously varied discharge.**
27 **Serial discharges.**
28 **Rain producers.**
29 **Ambulant discharge and supply**
30 Vehicle attachments,
31 Railroad sprinklers
32 Stock alarms,
33 Antirobber,
34 Street oilers
35 Heated,
36 Street flushers,
37 Reciprocating discharging member,

299. FLUID SPRINKLING, SPRAYING, AND DIFFUSING—Continued.

Ambulant discharge and supply

38 Rotating discharging member,
39 Adjustable discharging member
40 Fluid-pressure feed,
41 Liquid pump feed.
42 Return by-pass,
43 Fluid-pressure feed
44 Hydrant charged,
45 Liquid pump feed
46 Return by-pass.
47 **Ambulant discharge and stationary supply**
48 Coke quenchers,
49 Spray-fluid propelled
50 Reaction,
51 Intermittent supply,
52 Open tank or trough supply,
53 Associated hose reel,
54 Revolving,
55 Reciprocating,
56 Nozzles
57 Adjustable.
58 **Nonambulant discharge and supply**
59 Nozzle flushers and cleaners,
60 Embedded
61 Disappearing sprinklers,
62 Moving discharging member
63 Rotating disk or drum,
64 Spray-fluid actuated
65 Wrigglers,
66 Piston,
67 Rotor
68 External,
69 Reaction
70 Multiple sets,
71 Oscillatory.

299. FLUID SPRINKLING, SPRAYING, AND DIFFUSING—Continued.

Nonambulant discharge and supply

72 Adjustable discharging member
73 Nozzles
74 With deflectors,
75 Nozzles
76 With deflectors.
77 **Combined hose holder and fluid supply**
78 Reels
79 Automatic valves,
80 Automatic valves.
81 **Overhead vehicle washers.**
82 **Locomotive-cab squirts.**
Sprayers
82.5 Door actuated,
83 Dissolvers and mixers
84 Lateral chamber
85 Piston,
86 Multiple fluid
87 Steam,
88 Hand-pump atomizer type
88.5 Nebulizers,
89 Combined with pressure feed,
90 Collapsible ejector
91 Reservoir supply,
92 Piston feed
93 Threaded rod,
94 Syringe type,
95 Fluid-pressure feed
96 Air compressor,
97 Liquid-pump feed
98 Gravity intake,
99 Combined receptacle and syringe type,
100 Receptacle and pump connecting means.
101 **Sprinklers, gravity feed**
102 Can-and-rose type.

299. FLUID SPRINKLING, SPRAYING, AND DIFFUSING—Continued.

103 **Shakers.**

104 **Sprinkler pipes**

105 Couplings,

106 Nozzled, and regulable outlet.

107 **Nozzles**

107.1 Internal combustion engine type

107.2 Combined with pump,

107.3 Deformable nozzle member,

107.4 Reciprocating valve

107.5 Special valve actuation,

107.6 Fluid pressure operated,

107.7 Atomizing

107.8 Fluid pressure operated.

108 Heads,

109 Air-supply devices for firemen,

110 Penetrating,

111 Spray poles and attachments,

112 Handled,

113 Fluid-rotation controllers

114 Whirlers

115 Centrally and peripherally ported

116 Valved,

117 Convertible solid stream,

118 Valved,

119 Adjustable whirler member,

120 Whirler inserts,

121 Deflectors

122 Cutters,

123 Spray-fluid actuated

124 Ball,

125 Nozzle closures,

126 Rotating,

127 Adjustable

128 Transversely slidable,

129 Swinging or pivoted,

130 Axially movable

131 Valve carried,

299. FLUID SPRINKLING, SPRAYING, AND DIFFUSING—Continued.

Nozzles

132 Adjustable or variable discharge port

133 Automatic,

134 Constrictors,

135 Swinging throttlers,

136 Axially reciprocable throttlers,

137 Interchangeable ported members,

138 Terminal cock,

139 Transversely movable port-carrying member,

140 Multiple inlet

140.1 Supplemental jet

141 Multiple outlet

142 Aspiratory,

143 Converging,

144 Valved

145 Combined central and annular outlets

146 Compound valve,

147 Rotary plug or disk,

148 Reciprocating valve,

149 Valved

150 Axially movable,

151 Rotary

152 Disk,

153 Spray orifice,

154 Tapered and flattened.

300 BRUSH, BROOM, AND MOP MAKING.

1 **Miscellaneous.**

2 **Brush-making machines**

3 Drilling and tuft setting,

4 Tuft feeding and setting,

5 Tuft gathering and setting

6 Drawn work,

7 Tuft gathering,

8 Tuft setting,

9 Filling,

10 Work holders

11 Positioning devices.

12 **Broom-making machines**

13 Nailing and stapling,

14 Winding,

15 Wire banding.

16 **Mop-making machines.**

17 **Brush and broom trimming.**

18 **Dressing and assorting.**

19 **Implements.**

20 **Handle setting.**

21 **Processes.**

301 LAND VEHICLES—WHEELS AND AXLES.

1 **Combined wheel and axle modification**

2 Cushion lateral thrust,

2.5 With pedal crank.

5 **Wheels**

5.3 Skate

5.7 With antifriction bearings.

6 With drive or brake attachments,

7 Wheelbarrow type,

8 Auxiliary bracing,

9 Detachable wheel section

10 Demountable rims

11 Securing means

12 Spoke attached,

13 Plural rims,

14 Rim removing,

15 Contracting rim,

16 Expansible wheel,

17 Bayonet joint,

18 Radially wedged

19 Transversely extending wedges

20 Independently movable

21 Radial bolts,

22 Ring,

23 Removable side ring,

24 Removable side lugs,

25 Latches

26 Movable locking ring

27 Expansible ring,

28 Radially extending bolts,

29 Pivoted,

30 Transversely divided

31 Plural sections

32 Hinged,

33 With end-manipulating structure

34 Tool connections,

35 Circumferentially divided,

36 Dual,

301. LAND VEHICLES—WHEELS AND AXLES—Continued.

Wheels
37 Protectors,
38 Emergency
39 Tires
40 Detachable traction increasing
41 Traction increasing
42 Chains,
43 Projecting spurs or cleats
44 Detachable,
45 Movable
46 Adjustable
47 Supplemental wheel attachments,
48 Alternately projecting and retracting
49 Supplemental wheel attachments,
50 Individually,
51 Spring projected,
52 Parallel rim, connecting cleats,
53 Recessed rims,
54 Combined tension and compression,
55 Tension
56 Tangentially arranged spokes,
57 Hairpin type,
58 Felly and spoke connections,
59 Hub and spoke connections
60 Simultaneous spoke tensioning,
61 Separable spoke sockets,
62 Compression
63 Disk
64 With spoke formation,
65 Cast metal,
66 Integrally connected spokes,
67 Felly and spoke connections
68 Adjustable
69 Screw,

301. LAND VEHICLES—WHEELS AND AXLES—Continued.

Wheels
Compression
Felly and spoke connections
70 Separate spoke socket
71 Combined felly joint,
72 Combined felly joint,
73 Pural spoke series
74 Hub and spoke connections
75 Spoke tighteners,
76 Driven spokes
77 Reinforcing bands or casings,
78 Spoke-clamping hubs,
79 Single spoke series
80 Hub and spoke connections
81 Spoke tighteners,
82 Driven spokes
83 Reenforcing bands or casings,
84 Spoke-clamping hubs
85 Ring-forming spoke ends,
86 Nonresilient tires
87 Fastening devices
88 Combined felly joint,
89 Interposed clips or wedges,
90 Rail-climbing devices,
91 Adjustable
92 Screw
93 Right and left threaded,
94 Wedge,
95 Fellies or rims
96 Metallic
97 Resilient tire,
98 Resilient tire,
99 Joints
100 Adjustable
101 Screw
102 Right and left threaded,

301. LAND VEHICLES—WHEELS AND AXLES—Continued.

Wheels
Fellies or rims
Joints
Adjustable
103 Wedge,
104 Spokes,
105 Hubs
106 Reenforcing bands and casings
107 Point bands,
108 Caps,
109 Axle boxes
110 Mounting,
111 Wheel attaching devices
112 Outer end stop
113 Linchpin,
114 Screw attached
115 Adjustable plural-part nut,
116 Hub wrench,
117 Tap bolts,
118 Bayonet joint attached,
119 Pivoted detent,
120 Sliding detent,
121 Movable-latch detent,
122 Stop-engaging collars or sleeves
123 Sand bands.
124 Axles
125 With combined vehicle structure
126 Rotary shaft or spindle,
127 Cranked or bowed,
128 Varying-length adjustment,
129 Trussed,
130 Emergency repairing,
131 Spindles
132 Mounting
133 Spring,
134 Skein,
135 Mounting
136 Spring.

302 CONVEYERS—FLUID CURRENT.

1 **Miscellaneous.**
2 **Special article.**
3 **With weighing.**
4 **Pneumatic stackers**
5 Auxiliary endless conveyer,
6 Separate chaff discharge,
7 Straw intakes
8 Through fan,
9 Tubes
10 Outlets.
11 **Systems**
12 Plural conveyers
13 Single feeder.
14 **Hydraulic conveyers**
15 Material intakes,
16 Material dischargers.
17 **Pneumatic conveyers**
18 Body supported,
19 Open blast,
20 Auxiliary liquid injecter,
21 Combined suction and pressure
22 Endless air circuit,
23 Fan by-pass,
24 Successive impulse,
25 Jet,
26 Intermittent air current,
27 Plural intake,
28 Plural discharge,
29 Keeping material in suspension
30 Whirling action,
31 Material-supporting jets,
32 Material-backflow discharge,
33 Automatic oscillating conduit,
34 Adjustable intake or discharge,
35 Pressure control,
36 Material intake
37 Fan casing,

302. CONVEYERS—FLUID CURRENT—Continued.

Pneumatic conveyers
Material intake
38 Thrower,
39 Plural feeder,
40 Simultaneous material and fluid admission,
41 Alternate material and fluid admission,
42 Feed regulating,
43 Material-circulating feeder,
44 Sifter,
45 Keeping material in suspension
46 Whirling current,
47 Auxiliary air current,
48 Trap chamber,
49 Successively registering pockets,
50 Screw feed,
51 Entraining fluid current,
52 Receptacle
53 Pressure chamber
Keeping material in suspension
54 Atmospheric discharge conduit,
55 Auxiliary material supply,
56 Mechanical agitator,
57 Entraining fluid current,
58 Suction nozzles,
59 Material dischargers
60 Ensilage distributers,
61 Scattering,
62 Air lock,
63 Nozzles.
64 **Conduits**
65 Material-motion observing.
66 **Processes.**

303 FLUID-PRESSURE BRAKE AND ANALOGOUS SYSTEMS.

1 **Miscellaneous.**
2 **Multiple systems**
3 Fluid pressure and electric,
4 Fluid pressure and vacuum.
5 **Multiple fluid-receiving points**
6 Multiple motors
6.1 Brake and door,
7 Sectional train
8 Multiple brake valves,
9 Supplementary in emergency.
10 **With pump**
11 Pressure control,
12 Vacuum.
13 **Multiple control**
14 Double heading,
15 Fluid and electric
16 Automatic electric
17 Electric impulse.
18 **Exterior control**
19 Deadman type.
20 **Electric control.**
21 **Speed control.**
22 **Load control.**
23 **Empty and load type.**
24 **Inertia control.**
25 **Automatic and direct**
26 Supplementary control pipe,
27 Direct on control-pipe reduction.
28 **Automatic**
29 Supplementary control pipe,
30 Supplementary reservoir pipe,
31 Vacuum,
32 Equilibrium,
33 Equalizing valves
34 Rotary type,

303. FLUID-PRESSURE BRAKE AND ANALOGOUS SYSTEMS—Continued.

Automatic
35 Synchronizing
36 Release,
37 Quick action
38 Service,
39 Control pipe to chamber,
40 Application valve,
41 Preliminary valve movement
42 Emergency preventers,
43 Slow-reduction emergency,
44 Secondary service operation,
45 Positive-movement equalzing valve,
46 Augmented feed to motor,
47 Train rear end first.
48 **Direct**
49 Liquid link.
50 **Motorman's valves**
51 Conductor type,
52 Multiple motors
53 Engine and train,
54 Equalizing
55 Preliminary discharge,
56 Details.
Charging
57 Plurality of pressures,
58 Reuse,
59 Outlet-pressure control
60 Maintaining,
61 Intermittent,
Motor
62 Motor-movement control,
63 Failure-system pressure,
64 Auxiliary reservoir
65 Motor remaining charged,
66 Control pipe
67 Preventers.

303. FLUID-PRESSURE BRAKE AND ANALOGOUS SYSTEMS—Continued.

Releasing
68 Motor
69 Quick,
70 Venting auxiliary reservoir,
71 Fluid-pressure retracting,
72 Delayed
73 Blow down,
74 Graduated,
75 Preventers
76 Motorman valve control,
77 Control-pipe pressure,
78 Auxilliary-reservoir control,
79 Loaded valve,
80 Auxiliary reservoir,
81 Control pipe
82 By action of control-pipe pressure,
83 To chamber.
84 **Flow retarders and cut-offs.**
85 **Supplementary reservoir.**
86 **Miscellaneous operations on control pipe.**
87 **Pulsation neutralizers.**
88 **Strainers and drain cups.**
89 **Locks.**
90 **Pipeless valves.**

304 SCAFFOLDS.

1 **Miscellaneous.**
2 **Self-sustaining**
3 Ladder type,
4 Independent standards,
5 Trestles
6 Extensible,
7 Extending mechanisms,
8 Crossed-leg type.
9 **Traveling.**
10 **Building propped**
11 Strut and bracket.
12 **Work surrounded.**
13 **Work surrounding.**
14 **Building-wall carried.**
15 **Suspended**
16 Rope,
17 Traveling,
18 Elevating,
19 Suspending devices.
20 **Roofing**
21 Wheeled.
24 **Window**
25 With steps,
26 Extensible,
27 Outside supporting strut.
28 **Pole and tree platforms.**
29 **Elevating platforms**
30 Brackets
31 Ladder.
32 **Details**
37 Posts and struts,
38 Platforms,
39 Putlogs,
40 Binders
41 Flexible.

305 LAND VEHICLES — WHEEL SUBSTITUTES.

1 **Miscellaneous.**
2 **Portable track**
Endless
3 Wheeled-vehicle attachments,
4 Frame carried
5 Annular,
6 Wheel carried
7 Annular,
8 Plural wheels
9 Intermediate supporting frame,
10 Flexible tracks,
11 **Steppers**
12 Radial rotating legs,
13 Wheels with rim-carried feet.

306 TOOL-HANDLE FASTENINGS.

1 **Miscellaneous.**
1.1 **Scythe type**
1.2 Adjustable angle
1.3 Offset tang.
2 **Adjustable angle**
Pivoted
3 Swiveled,
4 Bracing bar,
5 Wedge or cam,
6 Multiple seat or socket,
7 Ball and socket
8 Clamping cheeks,
9 Radial screw,
10 Arc-shank connection,
11 Hinged
12 Notched arc and detent
13 Spring actuated,
14 Locking pin,
15 Screw clamp,
16 Pivot clamp
17 Positive lock,
18 Locking tang.
19 **Hinged, freely swinging.**
20 **Resilient connection.**
Rigid
21 Tool end partial socket,
22 Socket attached
23 Stud-and-slot interlock,
24 Welded, riveted, or bolted,
25 Interleaving,
26 Separate clamp,
27 Recess seated,
Socket
28 Movable detent,
29 Expanded or contracted part,
30 Screw,
31 End, integral,
32 Intermediate, transverse tool,
33 Wedge
34 Screw actuated,

306. TOOL-HANDLE FASTENINGS—Continued.

Rigid

35 Headed securing rod or plate,
36 Headed securing rod and shield,
37 Reenforcing shield,
38 Through securing rod,
39 Split or divided head,
40 Loop or yoke connection,
41 Integral tang,
42 Handle and bit holder,
43 Interlocked bit and handle,
44 Trowel type,
45 Plural tangs, fork type.

307 NO CLASS.

308 MACHINE ELEMENTS—BEARINGS AND GUIDES.

1 **Miscellaneous.**
2. **Pivot.**
3 **Guide or slide**
4 Cylindrical,
5 Lubricating,
6 Antifriction
7 Signal rod.
8 **Rotary**
9 Fluid support,
15 Bearing supports
16 Vehicle wheel
17 Wear compensating,
18 Idle pulley.
19 Plow or colter disk,
20 Roller conveyer,
21 Rocker shaft,
22 Machine frame connected
23 Crank shaft
23.5 Pedal crank,
24 Locks,
25 Pedestal,
26 Resilient,
27 Shaft hangers
28 Flexible suspension,
29 Self-aligning,
30 Sheet metal,
31 Adjustable
32 Vertically and horizontally
33 Vertical,
34 Wall bracket.
35 Plain and antifriction,
36 Plain
36.1 Combined with seal.
36.2 Mechanically actuated,
36.3 Fluid or fluid-actuated,
36.4 Centrifugal,
36.5 Scrapers,

308. MACHINE ELEMENTS—BEARINGS AND GUIDES—Contd.

Rotary
Plain
37 Radial
38 Car journal
39 Pressed metal,
40 Exterior
41 Journal thrust plate,
42 Interior
43 Locomotives,
44 Lids
45 Outwardly swinging
46 Spring cushioned,
47 Spring and cam,
48 Transversely swinging,
49 Sliding,
50 Structure
51 Latches,
52 Pintles,
53 Brasses
54 Assembled,
55 Self-aligning,
56 Lined,
57 Fastening means,
58 Bodily movable
59 Rectilinear
60 Simultaneous adjustment.
61 Pivotal,
62 Eccentric,
63 Wear compensating
64 Axle,
65 Transverse
66 Wedge,
67 Pitman
68 Wedge,
69 Axial
70 Tapered sleeve
71 Split,
72 Self-aligning,

308. MACHINE ELEMENTS—BEARINGS AND GUIDES—Contd.

Rotary
Plain
Radial
73 Distributed weight,
74 Cap and block
75 Hinge cap,
76 Lubricating and cooling
77 Cooling,
78 Lubricating
79 Car-journal-box type
79.1 Brass,
80 With guards,
81 Brass connected reservoir
82 Capillary,
83 Cellar reservoir
84 Mechanically operated pumps,
85 Journal-operated supply
86 Centrifugal,
87 Capillary
88 Spring press,
89 Waste retainer
89.1 Integral with box,
90 Roller applied
91 Yieldably supported,
92 Axle
93 Force feed,
94 Yoke reservoir,
95 Axle-supported reservoir
96 End reservoir,
97 External feed
98 Spiral groove,
99 Capillary,
100 Sleeve,
101 Internal feed
102 Capillary,
103 Internal reservoir
104 Capillary,
105 Clearer and agitator,

Rotary
Plain
Radial
Lubricating
106 Rotary element
107 Force feed,
108 Distributing sleeve,
109 Rotary-element reservoir
110 Radially extending reservoir,
111 Capillary,
112 Regulated feed,
113 End and center feed
114 End feed,
115 Center feed,
116 Distributing devices,
117 Inward deflector,
118 Rotary blade,
119 Agitator,
120 Bolts,
121 Rotary shaft
122 Force feed,
123 External reservoir,
Horizontal shaft
124 Upper reservoir
125 Capillary supply,
126 Lower reservoir
127 Shaft operated elevating means
128 Band or chain
129 Band structure,
130 Rollers,
131 Stationary conveyor
132 Capillary,
133 Suction,
134.1 Vertical shaft.
135 Thrust
136 Vehicle center,
137 Truck center.

308. MACHINE ELEMENTS—BEARINGS AND GUIDES—Contd.

Rotary
Plain
Thrust
138 Truck side.
139 Vertical shaft
140 Self-aligning
141 Combined step and neck,
142 Oscillatory suspension
143 Resiliently centered,
144 Oscillating step bearing
145 Resiliently centered,
146 Balancing devices
147 Resilient neck,
148 Bowl and spindle connector.
149 Spinning spindle,
150 Combined
151 Adjustable,
152 Laterally resilient,
153 Post,
154 Rocking,
155 Bolster,
156 Step,
157 Base supported,
158 Step bearing
159 Step and point,
160 Distributed thrust,
161 Collar and sleeve,
162 Multiple collar,
163 End thrust plate or washer
164 Multiple washer,
165 Hub liners and wear plates,
166 Screw adjustment,
167 Crank shaft,
168 Lubricating
169 Spinning spindle,
170 Force feed,
171 Capillary,
172 End thrust,

308. MACHINE ELEMENTS—BEARINGS AND GUIDES—Contd.

Rotary
173 Antifriction
174 Radial and thrust combined
175 Thrust collar,
176 With axial movement,
177 Radial
178 Machine frame connected
179 Crank shaft
179.5 Pedal crank,
180 Car journal,
181 Disc plow,
182 Rotating rim,
183 Concentric,
184 Resilient,
185 Separate path,
186 Closure plate,
187 Lubricating and seals,
187.1 Seals
187.2 Unit-handled,
188 Ball
189 Assemblies and mountings
190 Rotary element
191 Hub structure
192 Bicycle,
193 Unit handled
194 Self-aligning,
195 Assemblies
196 Divided race,
197 Race take-up,
198 Filling opening,
199 Spaced
200 Antifrictionally
201 Cages,
202 Roller
203 Fixed supporting roller
204 Track or tire,
205 Toothed or geared,
206 Antifrictionally spaced,

308. MACHINE ELEMENTS—BEARINGS AND GUIDES—Contd.

Rotary
Antifriction
Radial
Roller
207 Assemblies and mountings
208 Rotary element
209 Spaced,
210 Hub structure
211 Tapered roller or race,
212 Unit handled
213 Assembled,
214 Tapered roller or race,
215 Roller structure,
216 Races, liners, and sleeves,
217 Cages
218 Tapered,
219 Thrust
220 Vehicle center
221 Ball,
222 Roller,
223 Truck center,
224 Truck side
225 Ball,
226 Roller,
227 Vertical
228 Spinning spindle,
229 Step or neck
230 Ball,
231 Roller,
232 Horizontal
233 Ball,
234 Roller,
235 Races and cages,
236 Race fastening means.
237 **Sleeves, bushings, and liners**
238 Nonmetallic,
239 Bearing surface inserts,
240 Lubricating.
241 **Bearing-surface treatment.**
242 **Bearings, compositions, and materials.**

308. MACHINE ELEMENTS—BEARINGS AND GUIDES—Contd.

243. Materials for feeding oil.
244. Shims.
245. Casings.

309 MACHINE ELEMENTS, CYLINDERS AND PISTONS.

1 Miscellaneous.
2 Cylinders
3 Liners.
4 Pistons
5 Thrust balancing,
6 Lubricant control
7 Modified piston and ring,
8 Modified piston,
9 Heat control,
10 Trunk type
11 Compensating
12 Expansion devices
13 Limiting,
14 Composite,
15 Separate head and skirt,
16 Separate rod joint support,
17 Rod connections
18 Cushioned,
19 Wrist pin type,
20 Spherical,
21 Splash shields,

309. MACHINE ELEMENTS, CYLINDERS AND PISTONS—Contd.

Pistons—Continued.

22 Packings
23 Non-metallic,
24 Axially and radially expanding
25 Wedge type
26 Fluid operated,
27 Spring operated,
28 Spring,
29 Radially expanding
30 Spiral type,
31 Fluid operated
32 Conical,
33 Fluid cup type
34 Auxiliary expander.
35 Expanders
36 Longitudinally movable wedge
37 Spring operated,
38 Radially movable wedge,
39 Spring
40 Circumferential thrust,
41 Radial thrust
42 Coil type,
43 Annular type,
44 Individual ring structure
45 Lubrication supply and control rings,
46 Joints
47 Gap pieces.

310 NO CLASS.

311 SUPPORTS, TABLES.

1 Tables
2 Combined,
3 Convertible,
4 Connected,
5 Surgical
6 One-piece top,
7 Adjustable sectional top,
8 Portable,
9 Drainage provision,
10 Attachments
11 Foot or knee supports,
12 Sewing machine
13 Multiple unit,
14 Portable,
15 Attachments,
16 Motor control,
17 Specially supported
18 Wall
19 Exposed type, hinged,
20 Adjustable,
21 Automobile
22 Tray,
23 Lap
24 Sectional top,
25 With legs,

311. SUPPORTS, TABLES—Contd.

Tables—Continued.

Specially supported—Contd.

26 Bed
27 Tiltable and vertically adjustable,
28 Tiltable top,
29 Vertically adjustable,
30 Self-waiting
31 Rotatable parts
32 Top,
33 Center,
34 Serving appliances,
35 Adjustable
36 Vertically and tiltably
37 Cantilever type,
38 Tiltably,
39 Vertically
40 Cantilever type,
41 Extension
42 Center
43 Flexible top,
44 Hinged side rails,
45 Full width leaf storage
46 Elevating device
47 Cam,
48 Hinged leaves concealed,
49 Locks
50 Pedestal,
51 Top,
52 End
53 Flexible top,
54 End slide
55 End leaf elevated
56 Cam slide,
57 Straight slide,
58 Leaf elevators,
59 Hinged leaves concealed,

311. SUPPORTS, TABLES—Continued.

Tables
Adjustable
Extension
End
60 Drop leaf
61 Sliding support,
62 Pivoted support
63 Leg,
64 Toggle,
65 Sliding prop,
66 Circular segment leaves,
67 Folded top,
68 Elements
69 Slides
70 Tongue and groove,
71 Metal,
72 Equalizer
73 Rack and pinion,
74 Pivoted links,
75 Cable or chain,
76 Folding
77 One-piece top
78 Flexible,
79 Separable,
80 Hinged,
81 Legs folding perimetrically
82 Actuator,
83 Crossed legs,
84 Paired legs
85 Actuator,
86 Gravity lock,
87 Spring lock
88 Leaf type,
89 Sectional top
90 Carrying case type,
91 Crossed legs,
92 Paired legs,

311. SUPPORTS, TABLES—Continued.

Tables
Adjustable
Folding
93 Adjustable top
94 Tiltable only,
95 Vertically only,
96 Extension,
97 Elements
98 Leg braces,
99 Leg pivots and latches,
100 Detachable legs,
101 Pedestal
102 Knockdown,
103 Attachments,
104 Elements
105 Frames,
106 Tops
107 Edge binders,
108 Top to frame connections,
109 Legs
110 Fastening, legs and frames
111 Vertically moving leg,
112 Laterally moving leg,
113 Corner bolt,
114 Rotatable leg.

312 SUPPORTS, CABINET STRUCTURES.

1 **Miscellaneous.**
2 **Convertible.**
3 **Canopy or curtain type**
4 Wall
5 Knockdown or foldable,
6 Knockdown or foldable.
7 **Radio type.**
8 **Phonograph type**
9 Record holders
10 Disk
11 Rotatable rack,
12 Sliding holders,
13 Tilting holders,
14 Horizontally pivoted holders,
15 Selective ejection or delivery
16 Remainder locked,
17 Gravity delivered,
18 Individual ejector, master selector,
19 Master ejector.
20 **Picture machine or film type.**
21 **Disappearing-instrument type**
22 Combined closure and support
23 Interconnected closure and support
24 On swingable link or linkage,
25 With trackway,
26 Pivoted support,
27 On swingable link or linkage
28 With trackway,
29 With trackway,
30 Pivoted support.
31 **With gas or vapor treatment of material**
31.1 Mounted on container closure.
31.2 Externally accessible
31.3 Movably mounted holder.
32 **Suspended.**
33 **Worship.**

312. SUPPORTS, CABINET STRUCTURES—Continued.

34 **Book type.**
35 **Article-dispensing magazine type**
36 Article cooling,
37 Towel-service type
38 Continuous strip,
39 Continuous-strip type
40 Drawer magazine,
41 Rotatable,
42 Stacked-article type
43 Cup-shaped article
44 With releaser,
45 Cylindrical article
46 With ejector
47 Reciprocable,
48 With releaser,
49 Ball,
50 Card or sheet
51 With ejector
52 Master selector,
53 Friction roller
54 With follower,
55 Reciprocable ejector
56 With follower,
57 With follower,
58 With releaser,
59 Rotatable,
60 Chute or column
61 With follower,
62 With follower,
63 With ejector
64 Movable magazine,
65 Master selector
66 Reciprocable ejector,
67 Reciprocable ejector
68 With follower,
69 With follower,
70 With releaser,
71 With follower,

312. SUPPORTS, CABINET STRUCTURES—Continued.

Article-dispensing magazine type

72 Cylindrical article
73 Slender article
74 Web conveyor,
75 With ejector
76 Picker,
77 Movable magazine,
78 Reciprocable ejector
79 With pocket
80 Horizontal travel,
81 With automatic friction igniter,
82 With automatic friction igniter,
83 With releaser
84 Peripheral pocket
85 With automatic friction igniter,
86 With igniter,
87 With ejector,
88 With releaser,
89 Ball,
90 Separators,
91 Web conveyor,
92 With ejector
93 Master selector,
94 With releaser
95 Master selector,
96 Endless carrier,
97 Endless carrier,
97.1 Rotating magazine.
98 **Cylindrical-article type.**
99 **Bolt or card.**
99.5 **Power operated.**
100 **Outdoor type**
101 Wall or window
102 Show-case.
103 **Sorting type**

312. SUPPORTS, CABINET STRUCTURES—Continued.

Sorting type

104 Locked closure
105 Door or closure constructions
106 **Locker type**
107 **Sectional-unit type**
108 Knockdown,
109 Door or closure constructions
110 Equalizers,
111 Connectors and liners.
112 **Wall or window mounted type**
112.5 Brush or broom.
113 With racks.
114 **Show-case type**
115 With sprinklers,
116 Refrigerator,
117 With compartments
118 Stock and sample
119 Sliding compartment,
120 Pivotally mounted compartment,
121 Chute,
122 Sliding compartment,
123 Pivotally mounted compartment,
124 Chute,
125 Rotatable,
126 With trays
127 Interconnected closure and tray,
128 With racks
129 Combined closure and rack
130 Interconnected closure and rack,
131 On trackway,
132 On trackway
133 Pivoted support,
134 Endless carrier,
135 Rotatable,
136 Pivoted,

312. SUPPORTS, CABINET STRUCTURES—Continued.

Show-case type

137 Counter protectors or guards,
138 Door or closure constructions
139 With operators,
140 Joints and connectors.
140.1 **Counters**
140.2 Portable,
140.3 Tops,
140.4 Attachments.
141 **Of sheet metal.**
142 **Room corner type.**
143 **Knockdown type**
144 Foldable,
145 Connectors.
146 **With compartments**
147 Selective access
148 Rotatable,
149 Sliding compartment
150 On trackway,
151 Vertically,
152 Pivotally mounted compartment
153 On swingable link or linkage,
154 Tilting and sliding,
155 Tilting,
156 With vertically adjustable shelves,
157 Rotatable,
158 Chute
159 With sifter,
160 With work board
161 As door or closure,
162 With table,
163 With table top
164 Extensible,
165 With seat,
166 With ventilator,
167 With heater,

312. SUPPORTS, CABINET STRUCTURES—Continued.

With compartments

168 With refrigerator,
169 With sink,
170 With sifter,
171 With drains.
172 **With racks**
173 Combined closure and rack
174 Interconnected closure and rack,
175 On trackway,
176 With trackway
177 Extension trackway
178 Pivoted extension
179 Horizontal axis,
180 Nesting trackway,
181 Pivoted support,
182 Endless carrier,
183 Rotatable,
184 Pivoted support
185 Horizontal axis.
186 **Combined closure and tray or shelf.**
187 **With trackway**
188 With slide or shelf.
189 **With door or closure constructions**
190 Flexible,
191 Interconnected,
192 With operators,
193 Locking devices.

314 ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES.

1 Automatic substitution of discharge device, electrode or lamp
2 With current shifting switch,
3 Differential separation type,
4 Common electrode operating type
5 Electrode magazine type,
6 Current and/or potential actuated release.
7 Plural devices
8 Series connected.
9 With signal, indicator and/or alarm.
10 With automatic shunt and/or cut-out
11 Shunt circuit closing
12 Regulating magnet placed in the shunt,
13 With compensating impedance
14 Feed regulating mechanism actuated switch,
15 Current and/or potential actuated switch
16 Feed regulating mechanism actuated switch,
17 Switch operated type
18 Current and/or potential actuated switch
19 Feed regulating mechanism switch actuated type.
20 With discharge deflecting means.
21 With auxiliary material supply to the discharge
22 Fluent material feed.
23 With electrode tip cleaner or film puncturing means
24 Repeated contact type.
25 With economizer.

314. ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES—Con.

26 With ventilator, fume flow shield, fume condensor and/or temperature modifying means
27 Movable type, connected to the electrode or electrode moving mechanism,
28 Ventilator, fume director and/or condensor,
29 Liquid circulating type,
30 Radiating transmitter type.
31 Polyphase a. c. supply.
32 With transformer in supply line.
33 Three or more series connected electrodes.
34 With auxiliary starting electrode.
35 With auxiliary control electrode for the electrode moving mechanism.
36 Plural cathode and/or anode type
37 Consumption feed type,
38 Interconnected feed operator.
39 Oscillatory and/or rotary electrode motion type
40 Interconnected feeding and oscillating and/or rotating mechanism
41 Rotary motion type power supply,
42 Rotary electrode
43 Plural rotary electrodes.
44 Disk or plate electrode type.
45 Inclined or parallel electrodes
46 Pivoted electrode
47 Plural pivoted electrodes
48 Linear feed,
49 Linear feed,
50 Interconnected feed operator.

314. ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES—Con.

51 Plural movable electrodes
52 Plural electrode feeding
53 Interconnected operator
54 With separate movement of one electrode,
55 With diverse rates of feed,
56 Gear, belt or chain connected.
57 Manual feed
58 With power drive.
59 Consumption feed type
60 Electrodes.
61 Fluid transmission.
62 Motor speed controlled.
63 Radiant energy responsive control type.
64 Electric discharge control circuit.
65 With electrode separating mechanism and feeding mechanism
66 Electromagnetic separating
67 Electromagnetic feed.
68 Positive feed
69 Rotary electric motor
70 With motor braking,
71 With motor circuit impedance regulator
72 Switch controlled motor circuit,
73 Switch controlled motor circuit
74 With regulation of switch operator,
75 Auxiliary motor circuit current supply,
76 Differential wound armature and/or field,

314. ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES—Con.

Positive feed
77 Pawl and ratchet,
78 Electromagnetic operator,
79 Power transmission control
80 Gear train
81 Reversible.
82 Escapement feed control.
83 Detent or brake controlled rotary feed member or gear
84 Movable feed frame type
85 Pivoted frame
86 Multiple magnet operated,
87 Locked during separating stroke
88 Positive acting brake or detent.
89 Thermostatic operator or controller
90 With mechanical energy storing device.
91 With resilient or lost motion connection.
92 With mechanical energy storing device
93 Rod gripper biasing type,
94 With electric motive power
95 Biased lever
96 Spring biased,
97 Spring biased.
98 With electrode counterbalance.
99 With retarder
100 Retarded feeding type.
101 Releasable electrode or rod gripper type
102 Plural clutches,
103 With separation limit stop,
104 Magnetic clutch,

314. ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES—Con.

Releasable electrode or rod gripper type

105 Electromagnetically operated
106 Plural electromagnet coils
107 Three or more,
108 Interconnected lever system
109 Common oscillating lever or armature,
110 Coaxial coils,
111 Concentric magnet and electrode.
112 **Sliding electrode type.**
113 **Electromagnetic operator and/or feed controlling**
114 With control of the electromagnet circuit
115 With current or voltage regulator
116 Current or potential responsive,
117 Shunt magnet control
118 With control of series magnet,
119 With electromagnetically operated separating
120 Movable coil,
121 Plural coils
122 Three or more,
123 Interconnected lever system
124 Common oscillating lever or armature,
125 Coaxial coils,
126 Opposed magnetic flux type,
127 Concentric magnet and electrode,
128 Vibration damped electromagnet.
129 **With current transfer device.**

314. ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES—Con.

130 **Frames and electrode supports**
131 With electric switch,
132 With electric impedance,
133 With electrode guides,
134 Adjustable electrode supports.
135 **With current or voltage regulator.**
136 **Miscellaneous.**

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS

1 **Cathode ray tube circuits**
2 Combined cathode ray tube and discharge device or lamp structure,
3 Combined cathode ray tube and circuit element structure
4 Inductive impedance or resonator
5 Ray passing through a hollow resonator
6 Plural hollow resonating members,
7 Connected to the deflecting electrodes,
8 Compensating for stray deflecting fields,
9 Plural cathode ray tubes in the circuit,
10 With radiant energy sensitive control means
11 With secondary emission stage in the cathode ray tube,
12 With secondary emission stage in the cathode ray tube,
13 Plural ray type tube,
14 Plural concentrating, accelerating and/or de-accelerating stages
15 Three or more stages
16 Intermediate stage at lower potential,
17 With ray deflecting stage interposed between plural concentrating or accelerating and/or de-accelerating stage or co-extensive with one such stage,
18 Deflecting the cathode ray
19 Ray sweep circuits
20 Ray cut-out when sweeping stops,
21 Ray sweeping over plural targets or anodes,
22 With control of ray intensity or concentration,
23 Plural diverse planes of ray sweeping
24 Interconnected control of sweeping,
25 Plural deflection means, at least one ray sweeping,
26 Plural currents and/or potentials for the sweep means,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Cathode ray tube circuits
Deflecting the cathode ray
Ray sweep circuits
27 Electromagnetically controlled sweeping,
28 Discharge device in the sweep circuit
29 Condensor in the sweep circuit,
30 Ray modulation,
31 Focusing and/or concentrating the ray.
32 **Combined load device or load device temperature modifying means and electrical circuit device structure**
33 Portable self contained,
34 With antenna,
35 Plural discharge device loads
36 Series connected discharge devices,
37 Cathode-anode circuit connected to the discharge control electrode of another discharge device load (cascade),
38 Corresponding electrodes connected by a circuit impedance (push-pull),
39 Discharge device load with wave guide, co-axial cable or resonant parallel wire transmission line,
40 Electrode formed as inductive impedance,
41 Inductive impedance connected between electrodes of a discharge device load
42 Connected to plural anodes or plural cathodes,
43 Connected to control electrode
44 With capacitive impedance connected to the control electrode,
45 With diverse type impedance,
46 Filament, electric heater, or resistance in shunt with the discharge electrodes of a discharge device load
47 Automatic switch in the shunt circuit,
48 Cathode or cathode heater in the shunt circuit,
49 Filament or electric heater in series with a discharge device load,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Combined load device or load device temperature modifying means and electrical circuit device structure
50 Load device temperature modifying means combined with or forming circuit impedance means,
51 Plural circuit elements
52 Plural impedance elements
53 Diverse types of impedances,
54 Plural inductive impedances,
55 Electric generator or piezo-electric device,
56 Discharge device load
57 Discharge device and transformer,
58 Discharge device and circuit impedance
59 Impedance connected between two electrodes
60 Impedance connected to an auxiliary starting electrode,
61 Discharge control discharge device,
62 Inductive impedance,
63 Discharge control discharge load,
64 Multiple filament load devices
65 Automatic substitution of the filament,
66 Series connected filaments,
67 Diverse resistance filaments,
68 Three or more controlled filament circuits,
69 Plural filaments energized in parallel,
70 Load device and transformer,
71 Load device and impedance,
72 Load device and periodic electric switch,
73 Electric switch inside evacuated or gas filled envelope,
74 Automatic shunt circuit closing or cut-out switch
75 Shunt circuit closing.
76 **Special application**
77 Vehicle
78 Vehicle motor or vehicle motion driven generator.

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Special application
Vehicle
79 Vehicle or engine speed controlled,
80 Load device controller combined with vehicle controller
81 Steering mechanism controlled,
82 Head light systems
83 Alternate circuit closing,
84 Door or closure controlled load device.
85 **With electromagnetic wave radiation preventing or shielding means.**
86 **Automatic substitution of the power supply**
87 With load device or electrode substitution.
88 **Automatic substitution of the load device or electrode**
89 Plural substitution of load devices or electrodes,
90 Plural load devices with selective substitution of load device or electrode,
91 Over-voltage or over-current controlled substitution,
92 Diverse type load device or electrode substituted,
93 With current shifting switch.
94 **With cathode or cathode heater supply circuit**
95 Plural load device systems
96 Series connected cathodes or heaters,
97 Pulsating or A. C. supply to the cathode or heater circuit,
98 Plural cathodes or heaters in the load device
99 Series connected cathodes or heaters
100 Thermostatic switch in the series circuit,
101 Discharge device and/or rectifier in the cathode or heater circuit,
102 Delayed application of the discharge potential
103 With surge generator in the discharge circuit,
104 Thermostatic controlled delaying means,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

With cathode or cathode heater supply circuit
105 Pulsating or A. C. supply to the cathode or heater circuit
106 Automatic cut-out or voltage regulator in the cathode or heater circuit,
107 Automatic cut-out or voltage regulator in the cathode or heater circuit.
108 **Confined gas or vapor type load device with pressure regulating means**
109 Auxiliary discharge type,
110 Valve controlled.
111 **Discharge device load with fluent material supply to the discharge space.**
112 **With load device temperature modifier**
113 Plural load device systems
114 Electric heater for the load devices,
115 Electric heater for the load device
116 Automatic cut-out or voltage regulator for the heater circuit,
117 Automatic control of the temperature modifier,
118 Load device circuit controlled by the temperature modifying medium.
119 **With automatic shunt and/or cut-out**
120 Combined with signal, indicator or alarm,
121 Plural load device systems
122 Series connected load devices,
123 Plural shunts and/or cut-outs,
124 Auxiliary electrode controlled,
125 Shunt circuit closing
126 With compensating impedance,
127 Supply circuit current and/or potential actuated switch
128 Plural switch operating means.

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

129 **With signal, indicator, or alarm**
130 Plural load device systems
131 Selective indication of the load device
132 Plural signals, indicators or alarms,
133 Plural signals, indicators or alarms,
134 Radiant energy responsive control type,
135 Discharge device and/or rectifier in the signal circuit,
136 Electrically operated switch controlling the signal circuit.
137 **Polyphase A. C. supply**
138 M phase supply to N phase load circuit
139 Polyphase supply circuit
140 Phase multiplying,
141 Transformer in the supply circuit
142 With interphase transformer in the supply circuit,
143 Convertible transformer connections,
144 Plural load devices,
145 Plural cathode and/or anode load device,
146 Plural discharge control discharge device load devices,
147 Plural cathode and/or anode discharge device load
148 Discharge control discharge device.
149 **With radiant energy sensitive control means**
150 Radiant energy responsive load device,
151 Load device irradiating the radiant energy responsive device,
152 Plural load devices
153 Selective energization of the load devices
154 Selective electric switch controlled by the radiant energy responsive device,
155 Plural radiant energy responsive devices,
156 Radiant energy control of an electric discharge device in the supply curcuit of the load device,
157 Discharge control discharge device load controlled by the radiant energy responsive device,

With radiant energy sensitive control means

158 Radiant energy controlled regulation of the current supply for the load device,

159 Electric switch controlled by the radiant energy responsive device.

160 Plural power supplies

161 Plural load devices

162 Diverse type load devices

163 Simultaneous application of diverse type current supplies to a load device,

164 Series connected current supplies,

165 Diverse type current supplies

166 Simultaneous application to a load device,

167 Plural cathode and/or anode load device

168 Diverse type current supplies to auxiliary and principal electrodes,

169 Diverse type current supplies to different electrodes,

170 Series connected current supplies,

171 Discharge device and/or rectifier in one of the supply circuits,

172 Periodic switch in one of the supply circuits,

173 Condenser in one of the supply circuits,

174 Plural diverse pulsating or A. C. supplies,

175 Diverse type current supplies

176 Simultaneous application to the load device.

177 Load device in the primary and secondary circuit of the supply transformer.

178 Plural diverse type load devices

179 Series connected diverse type load devices

180 Plural diverse discharge device loads

181 Asymmetrical discharge device load,

182 Electric discharge device load

183 Plural diverse discharge device loads.

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

184 Three or more load devices connected between diverse pairs of paired conductors.

185 Plural series connected load devices

186 Periodic switch in the supply circuit,

187 Condensor in the supply circuit

188 Condensor in shunt to load and supply,

189 Discharge device loads

190 Asymmetrical discharge device loads,

191 Convertible to parallel connected,

192 Combined with parallel connected load device,

193 Electric switch controlled load device.

194 Regulation of the control current and/or potential applied to discharge control discharge device loads by phase shifting means

195 Plural load device systems

196 Inverse parallel connected asymmetric load devices

197 Discharge control discharge device in the control circuit,

198 Discharge control discharge device in the control circuit,

199 Discharge control discharge device in the control circuit.

200 Discharge device and/or rectifier in the supply circuit

201 Plural load device systems,

202 Plural cathode and/or anode discharge device load

203 Discharge device or rectifier in the auxiliary starting electrode circuit

204 Discharge control discharge device in the auxiliary electrode circuit,

205 Plural discharge devices and/or rectifiers in the supply circuit,

206 Discharge device and/or rectifier in the primary circuit of the supply transformer,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Discharge device and/or rectifier in the supply circuit

207 Discharge device and/or rectifier in shunt to the load device,

208 Discharge control discharge device in the supply circuit.

209 Periodic switch in the supply circuit

210 Plural load device systems

211 Distributor type periodic switch means

212 Transformer in the supply circuit

213 Distributor switch means in the primary circuits of plural transformers,

214 With additional periodic switch in the primary circuit,

215 With additional periodic switch in the distributor switch means circuit,

216 Plural electrically operated switches,

217 Periodic switch selectively connectable to plural load device circuits,

218 Magneto-electric generator supply,

219 Periodic switch in the primary circuit of the supply transformer

220 Plural transformers in the supply circuit,

221 Secondary conductively connected to the primary,

222 Plural interrupted transformer coil circuits,

223 Condensor or inductance in the primary circuit,

224 Impedance or current regulator in the supply circuit,

225 Periodic switch cut-out,

226 Plural periodic switches or multiple contact periodic switch.

227 Condensor in the supply circuit

228 Plural load device systems

229 Condensor connected to plural cathodes or anodes of asymmetrical discharge device loads,

230 Discharge control discharge device loads,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Condensor in the supply circuit
Plural load device systems
231 Plural series connected condensor and load device circuits,
232 Condensor in shunt to load and supply,
233 Plural cathode and/or anode discharge device load
234 Condensor in the auxiliary starting electrode circuit,
235 Condensor connected to plural cathodes or anodes,
236 Electromagnetic influenced discharge device load,
237 Discharge control discharge device load
238 Condensor in the control circuit,
239 Transformer in the condensor load device circuit,
240 Electric switch in the condensor circuit,
241 Condensor in shunt to the load device and the supply
242 With an inductance in the circuit
243 Inductance in series with the load device, and the supply,
244 Inductance in the condensor circuit,
245 Resistance in the condensor circuit.
246 **Pulsating or A. C. supply**
247 With power factor control device,
248 Induction type discharge device load,
249 Potential node type discharge device load,
250 Plural load device systems
251 Inverse parallel connected asymmetrical discharge device loads,
252 Discharge control discharge device loads,
253 Full wave systems with asymmetrical discharge device loads,
254 Transformer in the supply circuit
255 Plural transformers in the supply circuit
256 Primaries in series,
257 With plural secondary or tapped secondary,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Pulsating or A. C. supply
Plural load device systems
258 Inductance in the supply circuit
259 Variable inductance,
260 Plural cathode and/or anode discharge device load
261 Auxiliary starting electrode type discharge device load
262 Transformer or auxiliary winding in the auxiliary electrode circuit,
263 Inductance or potential surge generator in the auxiliary electrode circuit,
264 Impedance in the auxiliary electrode circuit,
265 Full wave type system
266 Transformer in the supply circuit,
267 Electromagnetic influenced discharge device load,
268 Discharge control discharge device load
269 With plural discharge control devices,
270 Plural control potentials
271 Plural pulsating and/or A. C. potentials,
272 Rectifier and/or discharge device in the control circuit
273 With condensor in the control circuit,
274 Transformer in the control circuit,
275 Condensor in the control circuit,
276 Transformer in the supply circuit
277 Plural transformers in the supply circuit,
278 Three or more coil type transformers,
279 Current regulator in the primary circuit,
280 Convertible to inductance,
281 Relatively movable core and coil type transformer,
282 Regulating transformer,
283 Inductance in the supply circuit
284 Variable inductance
285 Relatively movable core and coil type inductance

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Pulsating or A. C. supply
Inductance in the supply circuit
Variable inductance
Relatively movable core and coil type inductance
286 Biased movable part with supply current controlled movement,
287 Periodic type current and/or voltage regulator in the supply circuit.
288 **Three or more wire distribution system.**
289 **Surge generator or inductance in the supply circuit**
290 Circuit interrupter in the inductance circuit.
291 **Current and/or voltage regulation**
292 Keyboard operated or pattern controlled regulator,
293 Pre-selectable regulator systems,
294 Plural load device regulation
295 Regulator selectively connectable to plural circuits
296 Inverse control of load devices,
297 Automatic regulation,
298 Mechanically connected regulators,
299 Plural regulators
300 Current generator control,
301 Plural automatic regulators,
302 Current generator control
303 Control of the prime mover,
304 Plural field type generator
305 Three or more fields,
306 Regulator in shunt to the load device,
307 Automatic regulation
308 Regulator responsive to plural conditions,
309 Thermal responsive regulator,
310 Shunted impedance type regulator,
311 Variable impedance type regulator.
312 **Plural load device systems**
313 Electric switch in the supply circuit
314 Pre-selectable switching systems

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Plural load device systems
Electric switch in the supply circuit
Pre-selectable switching systems
315 Electrically controlled load device switch,
316 Keyboard or pattern controlled switch,
317 Three or more controlled load device circuits
318 Group control systems
319 Four or more groups,
320 Plural switches
321 Master circuit closing switch,
322 Alternate circuit closing,
323 Sequential starting,
324 Plural discharge device loads
325 Discharge control discharge device loads.
326 **Discharge device load**
327 Discharge drawing type discharge device
328 Tilting discharge device
329 Electrically controlled tilting,
330 Auxiliary starting electrode type
331 Movable auxiliary starting electrode
332 Automatic switch in the electrode moving device circuit,
333 Automatic cut-out for the electrode moving device circuit,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Discharge device load
334 Plural cathode and/or anode discharge device load
335 Auxiliary starting electrode type discharge device
336 Plural auxiliary starting electrodes,
337 Diverse potentials for the discharge electrodes,
338 Electromagnetic influenced discharge device,
339 Discharge control discharge device load,
340 With de-ionizing means in the cathode-anode circuit,
341 With plural discharge control devices
342 Diverse types,
343 Plural electromagnetic devices,
344 Electromagnetic influenced discharge device
345 Rail type discharge device load,
346 Plural current supply to the electromagnet,
347 Series connected with the load device
348 Pulsating or A. C. supply to the electromagnet,
349 Discharge control discharge device load
350 Plural control currents and/or potentials
351 Plural pulsating of A. C. currents and/or potentials,
352 Rectifier and/or discharge device in the control circuit
353 With condensor in the control circuit,
354 Transformer in the control circuit,
355 Condensor in the control circuit
356 Inductance in the control circuit,

315. ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS—Continued.

Discharge device load
357 Movable electrode discharge device,
358 Plural gases or vapors in the discharge device.
359 **Pyro-electric device load.**
360 **Time-controlled.**
361 **Plural control stations.**
362 **Electric switch in the supply circuit.**
363 **Miscellaneous systems.**
364 **Testing lamps and/or discharge devices**
365 Plural lamps and/or discharge devices in the testing circuit,
366 Testing circuit for diverse type lamps and/or discharge devices,
367 Circuits for making diverse tests,
368 Testing discharge space characteristic
369 With application of current and/or potential to the discharge control means
370 Pulsating and/or alternating current and/or potential for the discharge control means
371 Pulsating and/or alternating potential for the anode.

316 ELECTRIC LAMP AND DISCHARGE DEVICES, MANUFACTURE AND REPAIR

1 **Methods of manufacture, repair, and salvage (e. g., aging and/or sensitizing)**
2 Repair or salvage
3 Generating gas or vapor within the envelope, or coating by vapor, gas, mist, or smoke within the envelope
4 Combined with assembly operation
5 Controlled vaporizing or coating
6 Depositing plural coatings
7 With diverse type coating operation
8 With subsequent treatment of the coating
9 Coating on particular base material or place
10 Plural gas or vapor generating operations
11 With gas introduction
12 With precedent or subsequent heating of tube or electrode
13 Including establishing an electric space discharge
14 Electro-magnetic induction heating
15 Filament heating
16 Generating gas or vapor from reactive composition containing a reducing agent
17 Combined operations
18 Evacuation
19 Combined with assembly operation
20 With gas, vapor, or liquid introduction
21 With subsequent evacuation
22 Including establishing an electric space discharge
23 Electrode position adjusting with optical operations
24 Evacuation, degasification, or gas, vapor, or liquid introduction
25 Gettering
26 Including establishing an electric space discharge
27 **Apparatus (e. g., aging and/or sensitizing)**
28 Repair or salvage
29 Electrode position adjusting with optical means

316. ELECTRIC LAMP AND DISCHARGE DEVICES, MANUFACTURE AND REPAIR—Continued.

Apparatus (e. g., aging and/or sensitizing)
30 Evacuation, degasification, and/or gas, vapor, or liquid introduction
31 Combined with assembly apparatus
32 Including means to establish an electric space discharge

317 NO CLASS.

318 NO CLASS.

319 NO CLASS.

320 ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING

1 **Condenser charging and/or discharging**
2 **Battery charging and/or discharging**
3 Including dry-cells or primary batteries
4 "Recharging," depolarizing and/or reconditioning
5 Combined charging and discharging
6 Plural, diversely treated, batteries
7 Series-parallel connections thereof
8 Transposition between charging and discharging circuits
9 Combined regulation of charging source or circuit and discharging circuit
10 Charging source and/or circuit controlled by discharging circuit
11 Starting and/or stopping of battery charging
12 Charging generator control
13 Discharging-circuit regulation
14 Alternately charging and discharging
15 Plural, diversely treated, batteries
16 Series-parallel connections thereof
17 Series-connected batteries
18 Variable number in series
19 Periodic or intermittent charging or discharging
20 High-rate, short-time charging systems
21 Periodic or intermittent charging or discharging
22 Plural rates of charging or discharging
23 Decreasing rates of charging
24 Three or more rates
25 With polarity control
26 By means of reversing switches
27 Combined control of source and charging circuit
28 Including charging-circuit making and/or breaking
29 Combined circuit regulation and circuit making and/or breaking

320. ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING—Con.

Battery charging and/or discharging

30 Control responsive to predetermined conditions
31 Plural, diverse conditions and/or with time delay means
32 Including voltage and current magnitudes
33 For battery-circuit making and/or breaking
34 For battery-circuit making and/or breaking
35 Thermal condition
36 For battery-circuit making and/or breaking
37 Instant of, or period of time.
38 For battery-circuit making and/or breaking
39 Voltage or current magnitude
40 For battery-circuit making and/or breaking
41 Speed or centrifugal forces
42 For battery-circuit making and/or breaking
43 Condition of battery charge
44 Control by ampere-hour or watt-hour type of device
45 For battery-circuit making and/or breaking
46 Control by gas-pressure responsive means
47 For battery-circuit making and/or breaking
48 With indicating, signalling and/or testing means
49 Battery circuit control
50 With bucking and/or boosting e. m. f. in charging circuit
51 By impedance in charging or discharging circuit
52 Pressure-responsive type of impedance
53 Unidirectionally-conductive devices in battery circuit
54 Battery-circuit making and/or breaking
55 Plural circuit makers and/or breakers
56 Plural, diverse or diversely treated sources of supply for charging

320. ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING—Con.

Battery charging and/or discharging

57 Rectifying systems for battery charging
58 Dynamo-electric type rectifier
59 Unidirectionally-conductive type rectifier
60 Space-discharge devices
61 Generation systems for battery charging
62 Physical starting and/or stopping of generator
63 Generator used as starting means
64 Generator field winding circuit control
65 Plural, diversely treated field windings
66 Differentially related
67 Auxiliary source of field circuit e. m. f.
68 Field-winding circuit impedance
69 Step short-circuited type
70 Pressure-responsive type of impedance
71 Armature or generating circuit shorted or grounded
72 Generator structure control

DEPARTMENT OF COMMERCE
UNITED STATES PATENT OFFICE

ALPHABETICAL INDEX TO

CLASSIFICATION OF PATENTS

TO ACCOMPANY THE MANUAL OF CLASSIFICATION OF PATENTS
REVISED THROUGH ORDER NO. 3810, APRIL 4, 1944

Bold Numbers Indicate Main Classes
Other Numbers Indicate Subclasses Thereunder
Plus Signs Indicate Indented Subclasses

The reference "see notes to defs." indicates that the notes to the definitions of the citation are extensive on the subject matter indexed.

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON: 1944

This index, while based on the official classification, is not confined entirely to terms appearing in the titles of classes or subclasses. No effort has been made to retain in the index every subclass title. Key words and titles of significant importance have been retained and other terms added in an endeavor to make the index a practical convenience as an aid to finding patented subject matter.

As long as the classification of patents continues to change, it is obvious that no permanent index can be produced; but although of a temporary character, no effort has been spared to make this index accurate.

It is recommended that the definitions of the cited classes and subclasses selected as pertinent be consulted, since there frequently are notes thereto referring to related classes and subclasses.

With a view to improving future editions of the index, the cooperation of users is earnestly requested in pointing out errors, omissions, or in making suggestions for a more helpful treatment of the matter.

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No.	Class	Div.
182	Sewerage	1
183	Gas separation	32
184	Lubrication	45
185	Motors	45
186	Store service	4
187	Elevators	4
188	Brakes	47
189	Metallic building structures	33
190	Baggage	29
191	Electricity, transmission to vehicles	34
192	Clutches and power-stop control	12
193	Conveyors, chutes, skids, guides and ways	4
194	Check-controlled apparatus	41
195	Chemistry, fermentation	63
196	Mineral oils	31
197	Typewriting machines	41
198	Conveyors, power driven	4
199	Type casting	17
200	Electricity, circuit makers and breakers	37
201	Resistances and rheostats	60
202	Distillation	25
204	Chemistry, electrical and wave energy	56
205	Metal drawing	13
206	Special receptacles and packages	40
207	Plastic metal working	13
209	Classifying, separating and assorting solids	25
210	Liquid separation or purification	49
211	Supports, racks	8
212	Traversing hoists	4
213	Railway draft appliances	34
214	Material or article handling	4
215	Bottles and jars	58
216	Label pasting and paper hanging	53
217	Wooden receptacles	40
218	Button, eyelet and rivet setting	11
219	Electric heating	60
220	Metallic receptacles	40
222	Dispensing	35
223	Apparel apparatus	24
224	Package and article carriers	29
225	Dispensing beverages	35
226	Filling and closing portable receptacles	35
227	Fire escapes	4
228	Ladders	4

No.	Class	Div.
229	Paper receptacles	40
230	Gas pumps and fans	9
231	Whips and whip apparatus	11
232	Deposit and collection receptacles	41
233	Centrifugal-bowl separators	25
234	Recorders	41
235	Registers	23, 41
236	Automatic temperature and humidity regulation	30
237	Heating systems	30
238	Railways, surface track	34
240	Illumination	30
242	Winding and reeling	61
243	Pneumatic dispatch	4
244	Aeronautics	22
245	Wire fabrics and structure	14
246	Railway switches and signals	34
248	Supports	52
249	Automatic weighers	36
250	Radiant energy	51, 54
251	Valves	39
252	Compositions	3, 64
253	Motors, fluid	9
254	Pushing and pulling implements	61
255	Earth boring	32
256	Fences	1
257	Heat exchange	30, 32
258	Railway mail delivery	61
259	Agitating	32
260	Chemistry, carbon compounds	6, 15, 31, 38, 43, 50, 59, 63
261	Gas and liquid contact apparatus	32
262	Mining, quarrying and ice harvesting	4
263	Heating	28
264	Speed-responsive devices	18
265	Force measuring	36
266	Metallurgical apparatus	28
267	Spring devices	45
268	Closure operators	1
270	Sheet-material associating or folding	17
271	Sheet or web feeding or delivering	17
272	Amusement and exercising devices	57
273	Amusement devices, games	62
274	Sound recording and reproducing	5
275	Scattering unloaders	1
276	Type setting	17

No.	Class	Div.
277	Multiple valves	39
278	Land vehicles, animal draft appliances	45
279	Chucks or sockets	52
280	Land vehicles	47
281	Books, strips, and leaves	53
282	Manifolding	53
283	Printed matter	53
284	Valved pipe joints or couplings	52
285	Pipe joints or couplings	52
286	Packed shaft or rod joints	52
287	Rod joints or couplings	52
288	Joint packings	52
289	Tying cords or strands	5
290	Prime-mover dynamo plants	60
291	Track sanders	34
292	Closure fasteners	20
293	Vehicle fenders	45
294	Handling, hand and hoist-line implements	4
295	Railway wheels and axles	45
296	Land vehicles, bodies and tops	47
297	Thermostats and humidostats	30
298	Land vehicles, dumping	45
299	Fluid sprinkling, spraying and diffusing	46
300	Brush, broom, and mop making	27
301	Land vehicles, wheels and axles	45
302	Conveyors, fluid current	4
303	Fluid-pressure brake and analogous systems	47
304	Scaffolds	4
305	Land vehicles, wheel substitutes	45
306	Tool-handle fastenings	52
308	Machine elements, bearings and guides	45
309	Machine elements, cylinders and pistons	28
311	Supports, tables	62
312	Supports, cabinet structures	8
314	Electric lamp and discharge devices consumable electrodes	60
315	Electric lamp and discharge devices, systems	54
316	Electric lamp and discharge devices, manufacture and repair	54
320	Electricity, battery and condenser charging and discharging	60

☆ United States Government Printing Office, 1944—586423

This numerical Class Index is triple folded so that when open it extends beyond the confines of the Manual in order that it may be conveniently used with the immediately preceding Alphabetical Index of subject matter for ready identification of the classes cited.

CLASSES NUMERICALLY ARRANGED

No.	Class	Div.
1	Nailing and stapling	11
2	Apparel	24
3	Artificial body members	55
4	Baths, closets, sinks, and spittoons	1
5	Beds	8
6	Bee culture	2
7	Compound tools	29
8	Bleaching and dyeing: fluid treatment and chemical modification of textiles and fibers	43
9	Boats and buoys	61
10	Bolt, nail, nut, rivet, and screw making	57
11	Books, making	53
12	Boot and shoe making	11
13	Electric furnaces	60
14	Bridges	33
15	Brushing, scrubbing, and general cleaning	27
16	Miscellaneous hardware	20
17	Butchering	2
18	Plastics	15
19	Textiles, fiber preparation	21
20	Wooden buildings	33
21	Preserving, disinfecting and sterilizing	44
22	Metal founding	3
23	Chemistry	59
24	Buckles, buttons, clasps, etc.	5
25	Plastic block and earthenware apparatus	33
26	Textiles, cloth finishing	21
27	Undertaking	20
28	Textiles	21
29	Metal working	13, 14, 29
30	Cutlery	53
31	Dairy	2
32	Dentistry	55
33	Geometrical instruments	62
34	Drying and gas or vapor contact with solids	49
35	Education	53
36	Boots, shoes, and leggings	11
37	Excavating	4
38	Textiles, ironing or smoothing	27
39	Gates	1
40	Card, picture, and sign exhibiting	35
41	Ornamentation	52
42	Firearms	22
43	Fishing, trapping, and vermin destroying	2
44	Fuel and igniting devices	64
45	Furniture	8
46	Amusement devices, toys	57
47	Plant husbandry	1
48	Gas, heating and illuminating	59, 64
49	Glass	5
50	Fluid-pressure regulators	39
51	Abrading	58
52	Explosive, pyrotechnic, and match compositions	43
54	Harness	11
55	Harrows and diggers	1
56	Harvesters	5
57	Textiles, spinning, twisting and twining	21
58	Horology	61
59	Chain, staple, and horseshoe making	57
60	Power plants	18
61	Hydraulic and earth engineering	33
62	Refrigeration	44
63	Jewelry	57
64	Machine elements, shafting and flexible shaft couplings	45
65	Kitchen and table articles	8
66	Textiles, knitting	21
67	Illuminating burners	30
68	Textiles, fluid treating apparatus	2, 27
69	Leather manufactures	11
70	Locks	20
71	Chemistry, fertilizers	59
72	Masonry and concrete structures	33
73	Measuring and testing	36
74	Machine elements and mechanisms	12, 45
75	Metallurgy	3
76	Metal tools and implements, making	58
77	Boring and drilling	47
78	Metal forging and welding	45
79	Button making	29
80	Metal rolling	13
81	Tools	29
82	Turning	13
83	Mills	25
84	Music	5
85	Driven, headed, and screw-threaded fastenings	57
86	Ammunition and explosive-charge making	35
87	Textiles, braiding, netting and lace making	21
88	Optics	7
89	Ordnance	22
90	Gear cutting, milling and planing	13
91	Coating	46
92	Paper making and fiber liberation	56
93	Paper manufactures	17
94	Roads and pavements	33
95	Photography	7
97	Plows	1
98	Ventilation	49
99	Foods and beverages	1, 63
100	Presses	2
101	Printing	17
102	Ammunition and explosive devices	30
103	Pumps	9
104	Railways	34
105	Railway rolling stock	34
106	Compositions, coating or plastic	38, 64
107	Bread, pastry, and confection making	20
108	Roofs	33
109	Safes, bank protection and related devices	20
110	Furnaces	19
111	Planting	1
112	Sewing machines	24
113	Sheet-metal ware, making	14
114	Ships	61
115	Marine propulsion	61
116	Signals and indicators	34
117	Coating: processes and miscellaneous products	38
119	Animal husbandry	2
120	Stationery	53
121	Motors, expansible-chamber type	18
122	Liquid heaters and vaporizers	46
123	Internal-combustion engines	12, 18, 28, 45, 48
124	Mechanical guns and projectors	62
125	Stone working	58
126	Stoves and furnaces	19
127	Sugar, starch, and carbohydrates	43
128	Surgery	55
129	Paper files and binders	53
130	Threshing	25
131	Tobacco	2
132	Toilet	53
133	Coin handling	41
134	Cleaning and liquid contact with solids	27
135	Tents, canopies, umbrellas, and canes	53
136	Batteries	60
137	Water distribution	39
138	Pipes and tubular conduits	52
139	Textiles, weaving	21
140	Wireworking	14
141	Washing apparatus	27
142	Wood turning	29
143	Wood sawing	29
144	Woodworking	29
145	Woodworking tools	29
146	Vegetable and meat cutters and comminutors	25
147	Coopering	29
148	Metal treatment	3
150	Cloth, leather, and rubber receptacles	29
151	Nut and bolt locks	57
152	Resilient tires and wheels	45
153	Metal bending	14
154	Laminated fabric and analogous manufactures	20, 55
155	Chairs and seats	8
157	Wheelwright-machines	29
158	Liquid and gaseous fuel burners	19
159	Concentrating evaporators	46
160	Closures, partitions and panels, flexible and portable	53
161	Time-controlling mechanism	61
163	Needle and pin making	13
164	Cutting and punching sheets and bars	57
166	Wells	32
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171	Electricity, generation	26, 42
172	Electricity, motive power	26, 42
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174	Electricity, conductors and insulators	65
175	Electricity, general applications	48
176	Electric lamps	54
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178	Telegraphy	16, 65
179	Telephony	16, 51, 65
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181	Acoustics	5
182	Sewerage	1
183	Gas separation	32
184	Lubrication	45
185	Motors	45
186	Store service	4
187	Elevators	4
188	Brakes	47
189	Metallic building structures	33
190	Baggage	29
191	Electricity, transmission to vehicles	34
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195	Chemistry, fermentation	63
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201	Resistances and rheostats	60
202	Distillation	25
204	Chemistry, electrical and wave energy	56
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206	Special receptacles and packages	40
207	Plastic metal working	13
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212	Traversing hoists	4
213	Railway draft appliances	34
214	Material or article handling	4
215	Bottles and jars	58
216	Label pasting and paper hanging	53
217	Wooden receptacles	40
218	Button, eyelet and rivet setting	11
219	Electric heating	60
220	Metallic receptacles	40
222	Dispensing	35
223	Apparel apparatus	24
224	Package and article carriers	29
225	Dispensing beverages	35
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228	Ladders	4
229	Paper receptacles	40
230	Gas pumps and fans	9
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255	Earth boring	32
256	Fences	1
257	Heat exchange	30, 32
258	Railway mail delivery	61
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DESIGN CLASSES

D 1. Advertising
D 2. Aeration and bottling
D 3. Apparel
D 4. Baths and closets
D 5. Beds
D 6. Book binding
D 7. Boots and shoes
D 8. Bread, crackers and lozenges
D 9. Brushing and scrubbing
D 10. Builders' hardware
D 11. Butchering
D 12. Care of livestock
D 13. Carpentry
D 14. Carriages and wagons
D 15. Chairs
D 16. Chemicals and medicines
D 17. Clasps and buckles
D 18. Clay and pottery
D 19. Coffins
D 20. Crinoline and corsets
D 21. Curtain fixtures
D 22. Cutlery
D 23. Dairy appliances
D 24. Dentistry
D 25. Educational appliances
D 26. Electricity
D 27. Felting and hats
D 28. Fences and gates
D 29. Fine arts
D 30. Firearms shields and targets
D 31. Fishing and trapping
D 32. Fuel
D 33. Furniture
D 34. Games and toys
D 35. Garden and orchard
D 36. Glass
D 37. Grinding and polishing
D 38. Harness
D 39. Harrows and diggers
D 40. Harvesters
D 41. Hoisting
D 42. Horology
D 43. Hose and belting
D 44. Household articles
D 45. Jewelry
D 46. Journals and bearings
D 47. Knitting and netting
D 48. Lamps and gas fittings
D 49. Laundry appliances
D 50. Locks and latches
D 51. Masonry
D 52. Measuring instruments
D 53. No class
D 54. Metal working
D 55. Mills and machinery
D 56. Musical instruments
D 57. Optical instruments
D 58. Packing and storing vessels
D 59. Paper manufactures
D 60. Paving
D 61. Photography and appliances
D 62. Pneumatics
D 63. Presses
D 64. Printing
D 65. Pumps
D 66. Railway cars
D 67. Refrigeration
D 68. Roofing
D 69. Safes
D 70. Sewing machines
D 71. Ships and boats
D 72. Signals
D 73. Soap and candles
D 74. Stationery
D 75. Steam vacuum pumps
D 76. Steam boilers
D 77. Steam engines
D 78. Steam valves
D 79. Stone working
D 80. Store furniture
D 81. Stoves and furnaces
D 82. Sugar and salt
D 83. Surgery
D 84. Threshing
D 85. Tobacco
D 86. Toilet articles
D 87. Trunks and equipments
D 88. Umbrellas and fans
D 89. Vegetable cutters and crushers
D 90. Velocipedes
D 91. Water distribution
D 92. Weaving
D 93. Woodworking

CLASSIFICATION OF DESIGN PATENTS

DESIGN CLASSES

D 1. ADVERTISING

1 Miscellaneous
2 Articles
3 Card racks and receivers
4 Desks and frames
7 Door and drawer plates
8 Labels
9 Picture exhibitors
10 Show boxes and cards
11 Show cases and stands
12 Signs
13 Tags

D 2. AERATION AND BOTTLING

2 Beer pumps and miscellaneous
3 Soda water apparatus

D 3. APPAREL

2 Boas, muffs and miscellaneous
3 Capes and wraps
4 Coats and vests
8 Collars and cuffs
9 Embroidery
10 Garters and belts
11 Gloves
12 Handkerchiefs
13 Head coverings
16 Neckties
17 Pants and drawers
19 Sewing and appliances
25 Shirts and bosoms
26 Skirts and protectors
31 Tailoring
32 Trimmings

D 4. BATHS AND CLOSETS

2 Basins, stands and miscellaneous
3 Bath room appliances
4 Bath tubs
5 Closets and urinals

D 5. BEDS

1 Miscellaneous
2 Bedstead attachments
4 Bedsteads
5 Cribs and cradles

D 6. BOOK BINDING

1 Miscellaneous
2 Books and covers

D 7. BOOTS AND SHOES

1 Miscellaneous
2 Boot jacks
3 Lasts
4 Overshoes
5 Soles and heels
6 Trimmings
7 Uppers

D 8. BREAD, CRACKERS AND LOZENGES

1 Miscellaneous

D 9. BRUSHING AND SCRUBBING

1 Miscellaneous
2 Brooms and brushes
6 Mats and scrapers

D 10. BUILDERS' HARDWARE

2 Bell hanging and miscellaneous
3 Bell pulls
4 Bells
5 Bolts
6 Casters
7 Door attachments
8 Handles
9 Hinges
10 Sash attachments
11 Sash holders and fasteners
12 Shutter fasteners
13 Stair rods and securers
14 Window and door buttons

D 11. BUTCHERING

1 Miscellaneous

D 12. CARE OF LIVE STOCK

2 Miscellaneous
4 Curry combs
5 Stable fittings

D 13. CARPENTRY

1 Miscellaneous
3 Center pieces
4 Columns and cornices
5 Mantels
6 Moldings
7 Stairs and posts

D 14 CARRIAGES AND WAGONS

3 Miscellaneous
2 Axles
6 Carriage attachments
13 Carriage steps and horse blocks
14 Children's carriages
15 Clips and wear irons
16 Frames
17 Hearses
18 Radiators and hoods
22 Rein and whip holders
23 Shafts, poles and attachments
24 Sleighs and sleds
25 Springs
26 Thill couplings and anti-rattlers
27 Tops and attachments
30 Wheels

D 15. CHAIRS

1 Miscellaneous
3 Barbers', dentists' and physicians'
6 Rocking
8 Stools and seats
11 Sofas and settees

D 16. CHEMICALS AND MEDICINES

1 Miscellaneous
2 Casings
3 Tablets

D 17. CLASPS AND BUCKLES

1 Buckles
2 Buttons and buttoners
3 Clasps
4 Book
5 Bundle ties
6 Clothes clamps
7 Cuff holders
8 Garment supporting
9 Wedge
10 Necktie fasteners
11 Resilient head and socket
12 Hooks
13 Machinery
14 Rings and snap-hooks
15 Suspenders

D 18. CLAY AND POTTERY

2 Miscellaneous

D 19. COFFINS

1 Miscellaneous
2 Coffin trimmings
9 Pedestals

D 20. CRINOLINE AND CORSETS

2 Corsets and miscellaneous
3 Hoopskirts and bustles
4 Brassieres

D 21. CURTAIN FIXTURES

1 Miscellaneous
6 Window shades

D 22. CUTLERY

1 Miscellaneous
2 Can openers
3 Knives
4 Pruning implements
5 Scissors and shears
6 Swords and scabbards

CLASSIFICATION OF DESIGN PATENTS—DESIGN CLASSES—Continued

D 23. DAIRY APPLIANCES
1 Miscellaneous

D 24. DENTISTRY
1 Miscellaneous

D 25. EDUCATIONAL APPLIANCES
1 Miscellaneous

D 26. ELECTRICITY
1 Miscellaneous
4 Battery plates
5 Cases and frames
6 Battery cases
7 Fans
8 Incandescent lamps
9 Insulator brackets
10 Insulators
11 Lightning arresters
12 Railway appliances
13 Switches
14 Telephone and telegraph instruments
15 Transformer cases

D 27. FELTING AND HATS
1 Miscellaneous

D 28. FENCES AND GATES
1 Miscellaneous

D 29. FINE ARTS
1 Artificial flowers and miscellaneous
2 Badges
3 Campaign
5 Elk
6 Exposition
9 G. A. R.
10 Maccabee
11 Masonic
16 Woodmen
17 Banners and flags
19 Medals
20 Picture and mirror frames
22 Pictures
23 Sculpture
27 Theatre appliances
28 Vases

D 30. FIRE-ARMS, SHIELDS AND TARGETS
1 Miscellaneous

D 31. FISHING AND TRAPPING
1 Miscellaneous
2 Bird cages
3 Insect destroyers
4 Traps

D 32. FUEL

1 Miscellaneous

D 33. FURNITURE

1 Miscellaneous
2 Book cases
3 Brackets and shelves
6 Bureaus
7 Desks
8 Hat and coat racks
9 Mirrors
10 Music stands and portfolios
11 School furniture
12 Sewing machine tables
13 Sideboards
14 Tables
16 Towel racks
17 Umbrella, shovel, and tong stands
18 Wall pockets
19 Wardrobes and cabinets
20 Wash stands

D 34. GAMES AND TOYS

1 Miscellaneous
2 Animal figures
3 Billiard tables
4 Dolls
5 Games and apparatus
11 Money boxes
13 Playing cards
14 Skates
15 Toys

D 35. GARDEN AND ORCHARD

1 Miscellaneous
2 Appliances
3 Flower pots and stands

D 36. GLASS

1 Miscellaneous
2 Articles
8 Drinking vessels
11 Window

D 37. GRINDING AND POLISHING

1 Miscellaneous

D 38. HARNESS

1 Miscellaneous
2 Bridle bits
3 Buckles, connectors and trace supporters
4 Checkrein hooks
5 Collars, hames, breaststraps and attachments
6 Halters and attachments
7 Harness saddles
8 Hitching posts
9 Hooks
10 Horse blankets
11 Horse boots
12 Pads
13 Rein guards and holders
14 Rings and loops
15 Riding saddles
16 Spurs
17 Stirrups
19 Trimmings
20 Tugs
21 Whips

D 39. HARROWS AND DIGGERS
1 Miscellaneous

D 40. HARVESTERS
1 Miscellaneous

D 41. HOISTING
1 Miscellaneous

D 42. HOROLOGY
1 Watches, plates and attachments
7 Clock cases
8 Watch cases
10 Clocks and attachments

D 43. HOSE AND BELTING
1 Miscellaneous

D 44. HOUSEHOLD ARTICLES
1 Miscellaneous
4 Butter, egg and table tongs
5 Butter dishes
6 Canisters and spice boxes
7 Casters
9 Cups and saucers
10 Dish stands and trays
15 Dishes, plates and covers
18 Dust pans
19 Fruit and cake dishes
20 Napkin rings
21 Pitchers
22 Salt cellars and cruets
23 Spittoons
24 Table furniture
25 Tea kettles
26 Tea service
29 Tools
30 Twine holders

CLASSIFICATION OF DESIGN PATENTS—DESIGN CLASSES--Continued

D 45. JEWELRY

1 Miscellaneous
4 Bracelets
9 Ear rings
10 Finger and scarf rings
15 Lockets
16 Ornamental chains
17 Watch chains and attachments
19 Brooches and pins

D 46. JOURNALS AND BEARINGS

1 Miscellaneous

D 47. KNITTING AND NETTING

2 Knit fabrics
3 Knit scarfs and hoods
4 Knit shawls
5 Machinery
6 Nets and netted fabrics
7 Stockings

D 48. LAMPS AND GAS FITTINGS

1 Miscellaneous
2 Candlesticks
3 Chandeliers
4 Gas and lamp brackets
7 Gas fittings
14 Lamp attachments
15 Lamp chimneys
16 Lamp shades
19 Lamps
20 Bases and stands
21 Fount holders
22 Gas and electric
23 Hanging
24 Lanterns and torches
27 Lighting devices
28 Match safes
29 Pocket
30 Reflectors
31 Street lamps and posts
32 Vehicle lamps

D 49. LAUNDRY APPLIANCES

1 Miscellaneous
6 Sadirons and holders

D 50. LOCKS AND LATCHES

2 Box fasteners
3 Door knobs
4 Keys
5 Latches
6 Lock trimmings
7 Locks
8 Padlocks

D 51. MASONRY

1 Miscellaneous

D 52. MEASURING INSTRUMENTS

1 Miscellaneous
2 Casings (Includes—Gasoline pumps)
3 Casings, for coin operated machines
4 Change apparatus
7 Thermometers and barometers
10 Weighing machines

D 53. NO CLASS

D 54. METAL WORKING

1 Miscellaneous
2 Articles
3 Chains
4 Drills, dies, dieplates, etc.
5 Horse-shoes and horse-shoe pads
6 Lathes and elements
7 Metal bars, pipes and ingots
8 Molding and tempering appliances
9 Nail and screw heads
10 Punching and riveting
11 Rope clamps, cleats, etc.
12 Spoons and forks
13 Tools
14 Tools and machinery
15 Wire fabric
16 Wrenches

D 55. MILLS AND MACHINERY

1 Miscellaneous

D 56. MUSICAL INSTRUMENTS

1 Miscellaneous
2 Organ cases
4 Phonographs
9 Pianos

D 57. OPTICAL INSTRUMENTS

1 Miscellaneous
7 Optics, instruments and appliances

D 58. PACKING AND STORING VESSELS

2 Bags and miscellaneous
3 Barrels
4 Baskets
5 Bottles
6 Angular
6.5 Rectangular
7 Triangular
8 Round
9 Figures
10 Stoppers
11 Boxes
12 Angular
12.5 Block
12.6 Rectangular
12.7 Square
13 Compartment
16 Blanks and fillers
17 Cans
25 Jars
26 Fasteners, caps and holders

D 59. PAPER MANUFACTURES

1 Miscellaneous
2 Articles
6 Blanks, notes, checks and bonds
8 Envelopes
9 Machinery
10 Paper hangings
13 Post cards
14 Writing paper

D 60. PAVING

1 Miscellaneous
2 Vault covers

D 61. PHOTOGRAPHY AND APPLIANCES

1 Miscellaneous

D 62. PNEUMATICS

1 Miscellaneous
2 Apparatus
3 Chimneys and cowls
4 Ventilation

D 63. PRESSES

1 Miscellaneous

D 64. PRINTING

11 Miscellaneous
2 Calico and fabrics
10 Hand and perforating stamps
10.1 Copying presses
12 Type
16 Ornaments and borders
17 Script

D 65. PUMPS

1 Miscellaneous

CLASSIFICATION OF DESIGN PATENTS—DESIGN CLASSES—Continued

D 66. RAILWAY CARS
- 1 Miscellaneous
- 2 Fixtures
- 3 Wagon, car and track irons

D 67. REFRIGERATION
- 3 Miscellaneous
- 2 Machinery
- Water and wine coolers

D 68. ROOFING
- 1 Miscellaneous

D 69. SAFES
- 1 Miscellaneous
- 2 Burglar and fire proof

D 70. SEWING MACHINES
- 1 Miscellaneous
- 2 Attachments

D 71. SHIPS AND BOATS
- 1 Miscellaneous

D 72. SIGNALS
- 1 Miscellaneous
- 4 Pyrotechnic
- 5 Speaking tubes and trumpets

D 73. SOAP AND CANDLES
- 1 Miscellaneous

D 74. STATIONERY
- 1 Miscellaneous
- 2 Bill files and clips
- 5 Calendars
- 7 Erasers and slate rubbers
- 8 Inkstands
- 9 Letter boxes
- 10 Mucilage holders
- 12 Paper weights
- 13 Pen racks and cleaners
- 17 Pens and pen holders
- 21 Pencil cases
- 24 Pencils

D 75. STEAM VACUUM PUMPS
- 1 Miscellaneous

D 76. STEAM BOILERS
- 1 Miscellaneous

D 77. STEAM ENGINES
- 1 Miscellaneous
- 3 Fire

D 78. STEAM VALVES
- 1 Miscellaneous

D 79. STONE WORKING
- 2 Monuments and miscellaneous

D. 80. STORE FURNITURE
- 1 Miscellaneous
- 2 Counters, shelving and wall fixtures
- 5 Display boxes and cards
- 8 Display forms and hangers
- 9 Display stands
- 10 Wire
- 11 Show cases

D 81. STOVES AND FURNACES
- 1 Miscellaneous
- 2 Boilers and oil burners
- 3 Coal scuttles
- 4 Cooking stoves and ranges
- 5 Fenders
- 6 Fire dogs
- 7 Fire places
- 10 Gas, oil and vapor stoves and logs
- 18 Grates
- 19 Heating stoves
- 20 Portable furnaces
- 21 Radiators and registers
- 24 Shovels, tongs and pokers
- 25 Stove attachments
- 26 Stove furniture

D 82. SUGAR AND SALT
- 2 Miscellaneous

D 83. SURGERY
- 1 Miscellaneous
- 8 Nursing bottles
- 12 Instruments

D 84. THRESHING
- 1 Miscellaneous

D 85. TOBACCO
- 2 Boxes, pouches and miscellaneous
- 6 Cigars, cigarettes and plugs
- 7 Machinery
- 8 Pipes and cigar holders
- 9 Cigar bands

D 86. TOILET ARTICLES
- 8 Combs
- 9 Jewel boxes
- 10 Miscellaneous

D 87. TRUNKS AND EQUIPMENTS
- 1 Miscellaneous
- 2 Accoutrements
- 3 Portfolios and pocketbooks
- 5 Trunks and traveling bags

D 88. UMBRELLAS AND FANS
- 1 Miscellaneous
- 2 Fans
- 3 Umbrellas
- 4 Handles and sticks

D 89. VEGETABLE CUTTERS AND CRUSHERS
1 Miscellaneous

D 90. VELOCIPEDES
1 Miscellaneous
2 Ball retainers
3 Bundle carriers
4 Chains
5 Chains and mud guards
6 Covers
7 Cranks
8 Frames
9 Front forks
10 Gear casings
11 Handle bars and handles
12 Hubs
13 Lamp brackets
14 Pedals
15 Saddle posts
16 Saddles
17 Sprocket wheels
18 Stands and supports
19 Toe clips
20 Wheels and tires

D 91. WATER DISTRIBUTION
1 Miscellaneous
2 Aquarium
3 Cocks and pipes
4 Fountains

D 92. WEAVING
1 Miscellaneous
2 Bed quilts
4 Carpets
10 Cashmeres
15 Machinery
17 Oilcloths
21 Rugs
24 Shawls
26 Tablecloths and towels

D 93. WOODWORKING
2 Miscellaneous
3 Sawing
4 Tools and handles